September 1930

Drug Markets

Established 1914

The Magazine of the Manufacturing Drug Trade

Editorials 227

Buy Now—Alcohol Control—The Same Method—Plants Will Improve—They Won't be Stopped—Are Doctors Exempt ?—Drug Concessions.

Feature Articles

An Antiseptic—What Is It ? 231

Closures for Glass—The Narrow Mouth 234

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Fine Chemicals 283

Perfumes and Flavoring Materials 294

Crude Drugs 300

Drug Market Place 310

Buyer's Guide 212

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Removing the Cause

It was Woodrow Wilson who first described the reason for poor times as psychological. This was a new thought at the time that he presented it, and since the thought in no way helped to remedy existing conditions, not many business men were pleased with the expression of it.

But the first step in the correction of poor business conditions is to determine whether there is any fundamental reason for the depression and then attempt to remove the cause. If a depression—such as the one of the current year—is due solely to an unfortunate psychological condition, then the thing to do is to remedy this condition. And the easiest method of remedying the present condition is by taking some definite steps to place some of the surplus of available money in circulation. And wise raw material buying at current prices will surely start the ball rolling.

VOL. XXVII DRUG MARKETS, INC. NUMBER 3

PUBLISHERS

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 W. 31st St., N.Y. City

Editor THOMAS R. FARRELL

Business Manager FRAZER V. SINCLAIR

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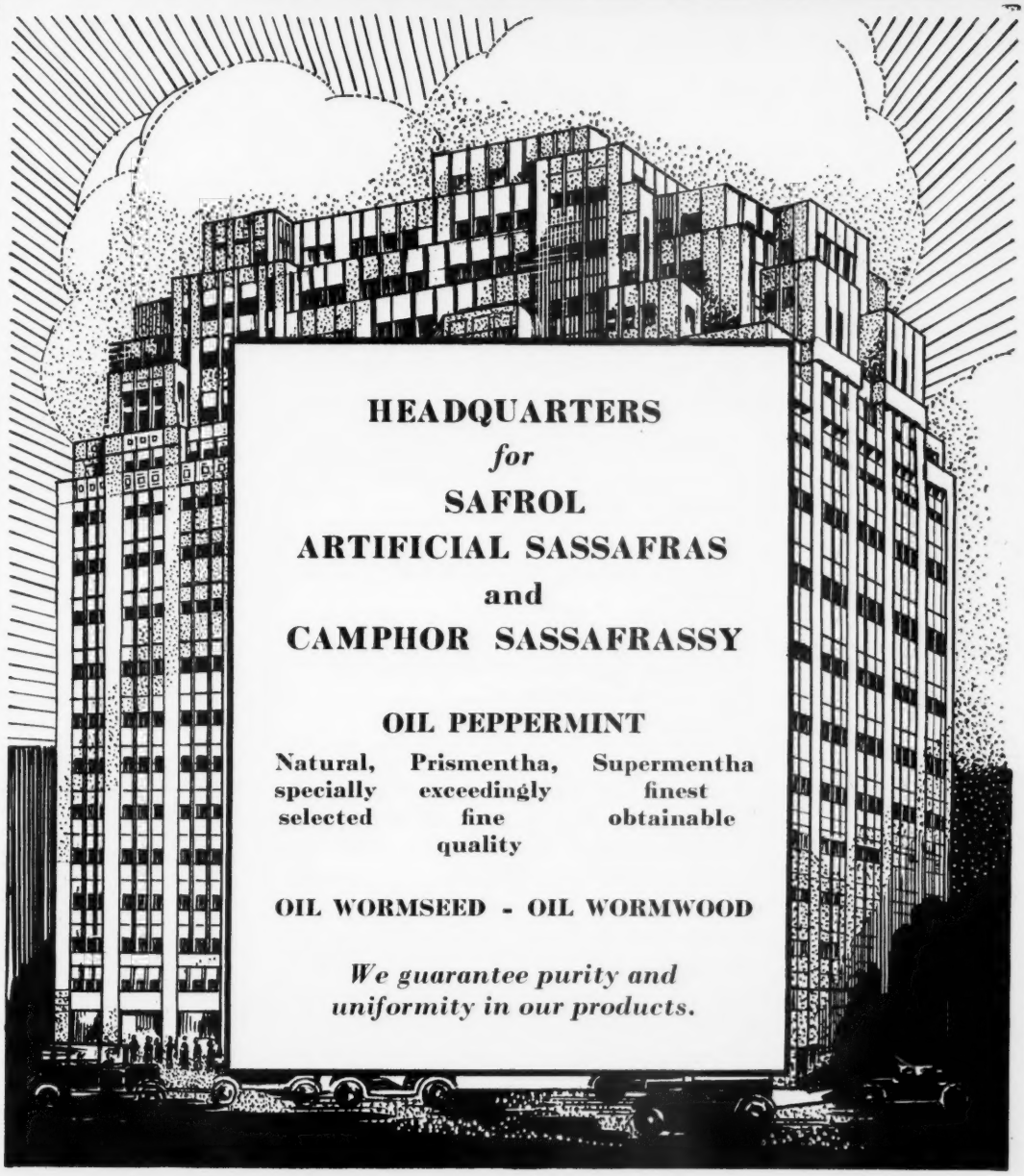
D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
and Kindred Products



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for
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and
CAMPHOR SASSAFRASSY

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OIL WORMSEED - OIL WORMWOOD

We guarantee purity and uniformity in our products.

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"The integrity of the house is reflected in the quality of its products."

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Buyers' Guide

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Pennsylvania Sugar Co
The Rossville Com. Alcohol Corp.
Stanco Distributors, Inc.
U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS

Dodge & Olcott Company
P. R. Dreyer Inc.
Euro American Corporation
Fritzsche Brothers, Inc.
Givaudan Delawanna, Inc.
Magnus, Mabee & Reynard Inc.
Newport Chemical Works, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

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Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

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Wilson Laboratories

BORAX

American Potash & Chemical Corp.
Pacific Coast Borax Co.

CHALK, PRECIPITATED

H. J. Baker & Bro.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

COD LIVER OIL

H. J. Baker & Bro.
P. R. Dreyer Inc.
Norwegian Cod Liver Oil Association

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Compagnie Nationale Des Aliments Naturels
J. L. Hopkins & Co.
McIlvaine Brothers, Inc.
S. B. Penick & Company

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Dodge & Olcott Company
P. R. Dreyer Inc.
Euro American Corporation
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Newport Chemical Works, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

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Dodge & Olcott Company
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Euro American Corporation
Fritzsche Brothers, Inc.
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Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

GELATINES

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GLYCERIN

H. J. Baker & Bro.
Colgate-Palmolive-Peet Co
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Will & Baumer Candle Co., Inc.

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Abbott Laboratories
J. T. Baker Chemical Co.
Chas. Cooper & Co.
Dow Chemical Co.
R. W. Greeff & Co.
Harshaw Chemical Co.
Heyden Chemical Corp.
Hoffmann-LaRoche, Inc.
Adolphe Hurst & Co., Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
Newport Chemical Works, Inc.
N. Y. Quinine & Chemical Works, Inc.
Chas. Pfizer & Co., Inc.
Schering Corporation
Wilckes-Martin-Wilckes Co.

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Schliemann Companies, Inc.

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John Powell & Co., Inc.

VANILLIN

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Givaudan Delawanna Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Works

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ADHESIVES

Nat'l. Adhesives Corp.

BOTTLES

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Maryland Glass Corp.
Owens-Illinois Glass Co.

BOXES (Corrugated)

Container Corp. of America
Hinde & Dauch Paper Co.

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American Can Co.

COLLAPSIBLE TUBES

Aluminum Co. of America
Bond Mfg. Corporation
New England Collapsible Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.
A. H. Wirz, Inc.

CLOSURES

CORKS

Armstrong Cork Co.

INSIDE THREAD CAPS

Spring Stopper Co.

LINERS

Bond Mfg. Corp.
General Felt Products, Inc.

METAL CAPS

Aluminum Co. of America
Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
Phoenix Hermetic Co.
Williams Sealing Corp.

MACHINERY & EQUIPMENT

FILLING MACHINES

Alsop Engineering Co.
Arthur Colton Co.
Horix Manufacturing Co.
The Karl Kiefer Machine Co.
Scientific Filter Co.
F. J. Stokes Machine Co.
Stokes & Smith Co.

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Alsop Engineering Co.
Arthur Colton Co.
Scientific Filter Co.
F. J. Stokes Machine Co.

PACKING & CARTONING

Package Machinery Co.
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LABELING EQUIPMENT

Economic Machinery Co.

PHARMACEUTICAL MACHINERY

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CCofA

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Let Us Help Cut Your Shipping Costs

The tremendous contribution of the Container Corporation of America towards the successful solution of difficult packaging problems of a host of industries is ample proof of the broad, thorough going experience which has made these solutions possible and acceptable to careful packers seeking economy with a fair margin of safety to goods in transit.

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Our line of products is very complete and there is always something to interest you in our efforts to reduce your costs. The quality of our products is beyond question. Ask any one of our thousands of users.

What are your needs? With our background of twenty-three plants and mills, we are in a position to give you quick service and generally short hauls. When you write, please refer to Department 7.

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Mid-West Box Company Sefton Container Corporation

Seven Mills • Fifteen Factories
Capacity • 1300 Tons Per Day

CCofA

General Offices **• Conway Bldg.**
111 W. Washington St., CHICAGO

NEW ENGLAND

New England is traditional for large and basic manufactures. From the impetus gained in Colonial days, the industries of New England have steadily waxed greater. Alcohol plays an important part in the manufacture of many products of New England enjoying world wide reputations for quality.

"SEE AMERICAN ···· FIRST"

ODORLESS, COLORLESS, "EVERCLEAR" ALCOHOL

Quality in drugs must be built up step by step. Start with the Alcohol . . . make sure of purity by using "Everclear."
This purity is dependable . . . and immediately apparent. There is a crystal clearness and absolute lack of odor which establishes the desirability of "Everclear" Alcohol.

ALCOHOL EVERCLEAR ALCOHOL
Reg. U. S. Pat. Off.

"Everclear" comes from our plant in the heart of the grain fields. And benefits from an exclusive process originated in our laboratories. This quality Alcohol will meet the important requirements of your drug production.

Plants:
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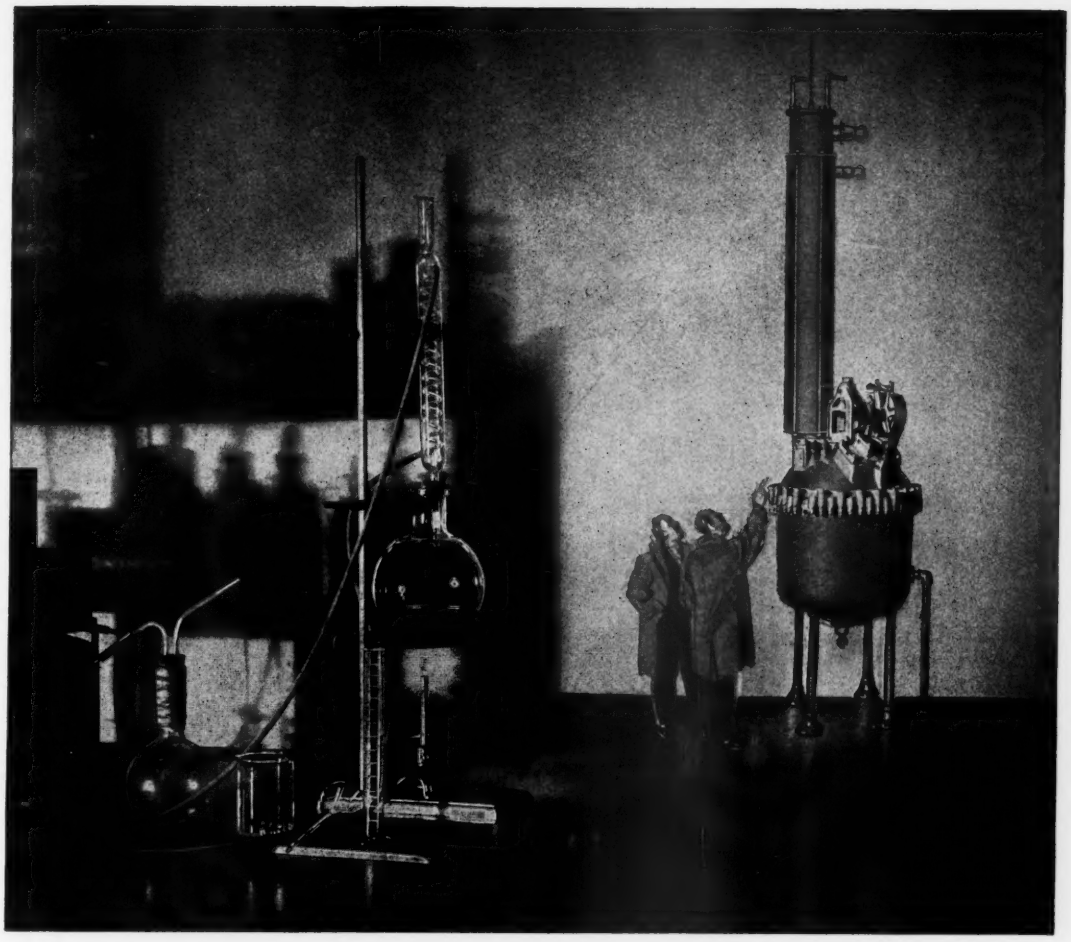
Gretna, La.

AMERICAN
COMMERCIAL ALCOHOL CORPORATION
420 Lexington Avenue, New York, N. Y.

Plants:
Philadelphia, Pa.
Sausalito, Cal.



"The finished product compares exactly with the laboratory tests!"

. . . BECAUSE GLASS WAS USED IN THE FACTORY AS WELL AS IN THE LAB . . .

Pfaudler Glass Lined Equipment meets the requirements of the most exacting *Chemical* Manufacturers. Possibility of corrosion is eliminated. And also, cleaning is made quick, thorough and easy. Pfaudler equipment makes the manufacturing process as accurate as the laboratory. Send for copies of our two new Chemical Catalogs Nos. 714 and 715 . . . complete details of our complete line. No obligation.

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GLASS LINED STEEL EQUIPMENT

BUILD GOOD WILL FOR YOUR PRODUCT

with CROWN SCREW CAPS

Millions of bottles of Jo-Cur are used yearly. It is a dressing table favorite for water waving and finger waving. CROWN SCREW CAPS have a small, but an important part in making every user a repeat customer.

MILLIONS of people enjoy a surer measure of safety—derive a definite degree of satisfaction, because of the CROWN SCREW CAP that closes and protects the packages they purchase.

Its perfect sealing prevents deterioration—preserves the original quality of the product. Ease of opening, convenience of reclosing saves time and temper—makes good will.

Millions of people have a friendlier feeling toward a host of glass packaged products as a result of CROWN SCREW CAP efficiency. What about the friendliness and good will of those who buy *your* product?

CROWN SCREW CAPS bring to you not only quality of product but "gauge tested" accuracy. Here also are research facilities of a world famed organization—coupled with willingness to be of assistance in solving your sealing requirements.

Special liners have been developed to meet dozens of special needs.

Write today for samples
and complete information

Crown Cork & Seal Co.

Baltimore • Maryland

Makers of the Crown

(THE FAMOUS CLOSURE FOR WIDE MOUTH GLASS)

PACKAGING

is a Production *and* Sales Problem

THE Production Department says packages must *protect* the product—keep it in the best possible condition until it's consumed—and the packaging machinery must be fast, economical and dependable.

The Sales Department says packages must be attractive, neat, convenient in size and shape, capable of effective display—because those factors have a decided effect on sales volume.

If the package and the machinery that produces it can't satisfy both Production and Sales, there's something wrong—and it *can* be corrected.

Stokes & Smith Packaging Machines handle the widest imaginable variety of products. Many of the largest producers of packaged goods have found them highly satisfactory and profitable. Our experience in supplying packaging machinery for 126 different materials may be useful to you. At least, it will cost you nothing to find out—write us today.

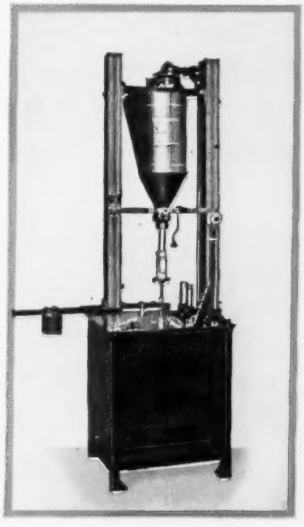
STOKES & SMITH CO.

PACKAGE FILLING, SEALING AND WEIGHING MACHINES
TIGHT-WRAPPING MACHINES, ENVELOPE SEALERS

4912 Summerdale Avenue, Philadelphia, U. S. A.

The UNIVERSAL FILLING MACHINE fills all kinds of powdered materials, even the more difficult kinds, into cans, jars, bottles, cartons, bags or practically any type of container. Particularly adaptable to containers of unusual size or shape. Handles weights from ½ ounce to 5 lbs. Can be used to measure by weight or by volume. Requires only one operator. Produces 15 to 30 filled containers per minute. Can also be furnished with Automatic Conveyor and Capping Device.

Stokes & Smith Packaging Machines also include numerous other types to meet any package requirement. Let us offer suggestions for your products.



FREEDOM FROM GRIT

?

DO THESE
"SNOW TOP"
qualities interest you?

1 Uniformity
2 Color
3 Purity
4 Cleanliness
5 Physical Character
6 FREEDOM FROM GRIT
7 Absorptive Properties
8 Binding Power

Like rust in metal, the presence of grit in a dentifrice or toilet preparation, is a menace.

GRIT has no place in SNOW TOP Chalk. Examine it by any method you choose, even microscopically; you will find SNOW TOP irreproachable.

There's a reason! The "ounce of prevention" is used religiously throughout manufacture to exclude physical contamination. From raw material to finished product SNOW TOP is hedged around with safeguards. Specially designed units of equipment, working in a closed system, provide positive insurance against any gritty particles straying in, and result in the superior quality we claim for SNOW TOP in this respect.

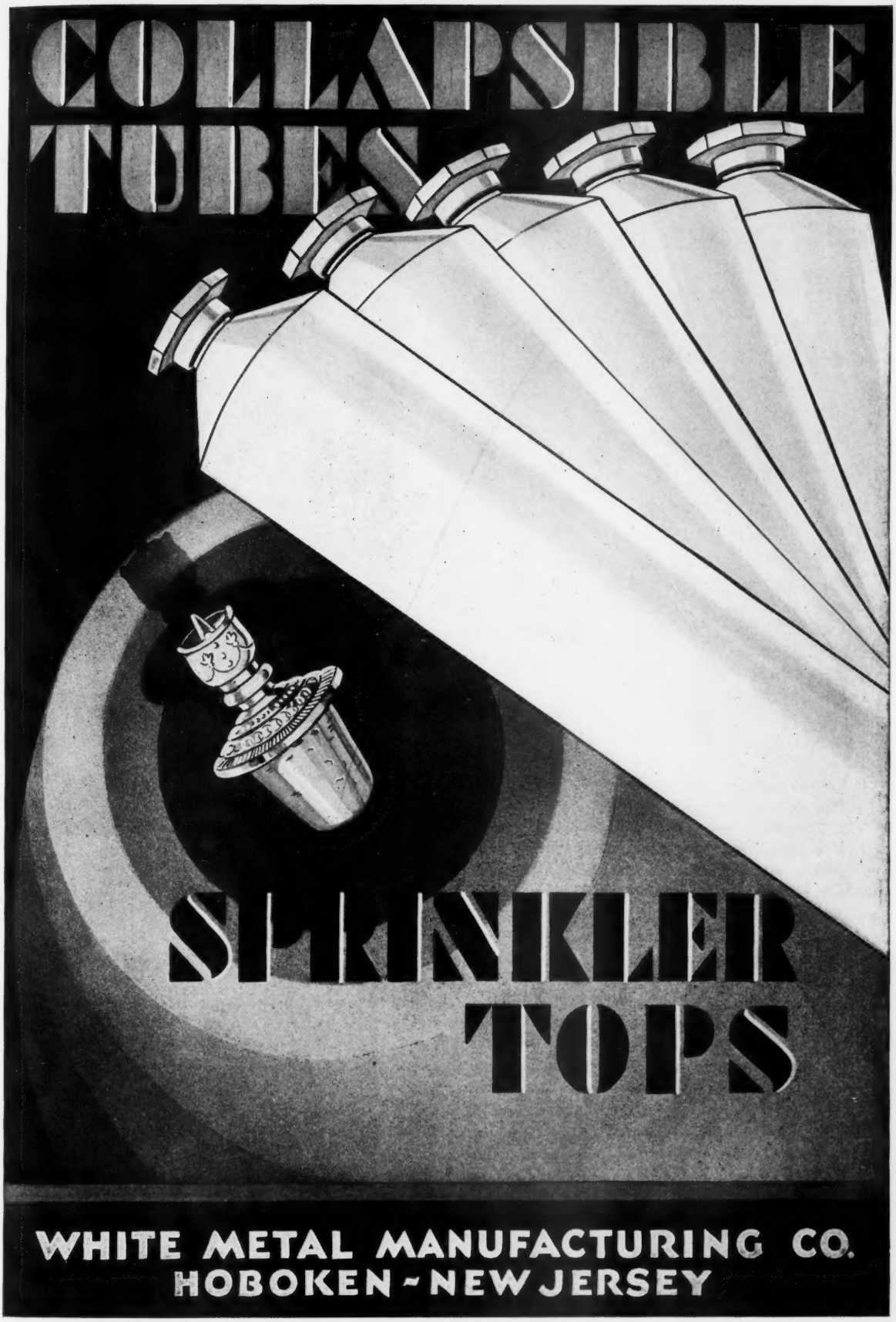
We invite your check-up. Ask us for a sample.

SNOW TOP

PRECIPITATED CHALK

Industrial Chemical Sales Co., *Inc.*

230 Park Avenue, New York City.


COLLAPSIBLE
TUBES
SPRINKLER
TOPS
WHITE METAL MANUFACTURING CO.
HOBOKEN - NEW JERSEY

Convenience, Purity and Economy Assured with the **ANCHOR AMERSEAL CAP**

It's not only important — but *all important*—that medicines should reach the shelves of the consumer's medicine closet without loss by evaporation—without the slightest change—absolutely pure. And recognizing this fact, the concerns which are established today as leaders in the pharmaceutical field have selected the AMERSEAL CAP to protect their products. Of course, unfailing convenience to the user also entered importantly into their choice . . .

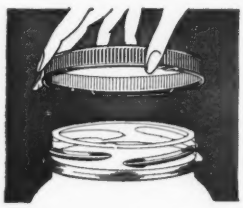
AMERSEAL CAPS have no threads to freeze or cement to the container. A quarter turn to the left removes them easily—a quarter turn to the right applies them. This all-around convenience holds true whether the package is opened and closed once or many hundreds of times. And yet these efficient closures can be absolutely relied upon to remain secure in shipping. Lithographed with your design in colors, AMERSEAL CAPS add distinction to any package—add greatly to its display value on the retailer's shelves.

From the factory executive's viewpoint, another important quality possessed by these caps is their speed and economy of application. Applied in the factory three or four times as fast as other types of closures, they add nothing to package costs despite their outstanding selling advantages . . . There are undoubtedly many outstanding economies and advantages which these caps possess in relation to your own particular products. Wouldn't it be "just good horse sense" to find out? To secure this information, simply fill out and mail the coupon found at the right.

Anchor Cap & Closure Corporation

LONG ISLAND CITY, N. Y. TORONTO, CANADA

19,250,000 *advertisements in The Saturday Evening Post and The Ladies' Home Journal are increasing the already great demand for products packed in glass under Anchor Amerseal Caps. Seal your products with Amerseals and get your share of this business. See our advertisements in The Saturday Evening Post and The Ladies' Home Journal.*



A quarter turn to the right applies the Anchor Amerseal Cap. Lugs, formed to fit the contour of the glass threads, draw the cap down and effect a tight uniform contact around the complete top edge of the container finish.

MANUFACTURERS: To secure full information about Anchor Amerseal Caps fill in and mail coupon!

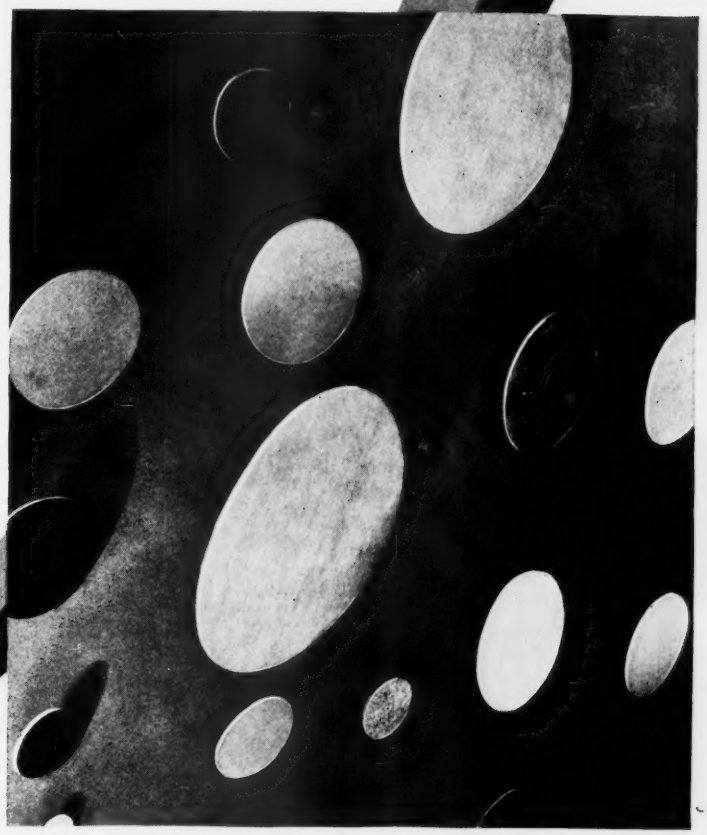
Send detailed advantages of using Anchor Amerseal Caps on our packages

*Name*_____

*Address*_____

We manufacture _____ and put out about _____ packages per year. Under separate cover we are sending empty samples of our packages.

LINERS for Metal Closures



A good product should never be sealed with an inferior liner. Because, more than anything else, the liner is responsible for preserving the quality of your product.

General Felt Products, Inc. have specialized in making such liners as Foil, Rubber and Waxed Pulp Board for many years.

Reziztol, recently perfected, is especially recommended for its clear color, its lack of odor and its resistance to chemical reaction.

General Felt Products Inc.

BUSH TERMINAL - - - BROOKLYN, N.Y.

FOR MAKERS of GOOD TOOTH PASTES

Run over in your mind the names of well known tooth pastes--those distinguished for the quality of the paste and the purity of the materials with which they are made!

You will be sure to find Sturge's Standard specified for the precipitated chalk of such tooth pastes.

Such qualities as the natural brilliant white of pure calcium carbonate, fluffiness according to specified grade, freedom from grit, etc., are expected of a good precipitated chalk.

In Sturge's Standard Precipitated Chalk for Dentifrices you find all these qualities. More important, you find an absolute uniformity, complying rigidly to the one grade which is best adapted to a particular tooth paste formula.

JOHN & E. STURGE, Ltd.
Birmingham, England

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REGISTERED TRADE MARK

Distributors:

H. J. BAKER & BRO.

271 MADISON AVE., NEW YORK, N. Y.

MAKERS *of* PRECIPITATED CHALK *for* OVER FIFTY YEARS

On Top o' Everything

PHARMACEUTICALS—elixirs, emulsions, extracts, fluidextracts, oils, spirits, syrups, tinctures, waters, powders, tablets, pills, capsules.

Proprietary remedies — tonics, germicides, antiseptics, cough compounds, ointments, liniments, mineral oil, rubbing alcohol, peroxide, effervescent salts.

THE PHOENIX CAPITOL CAP

Toilet preparations—creams, lotions, astringents, bath salts, shampoos, hair oils, bay rum, witch hazel, toilet water.

Household chemicals — insecticides, disinfectants, cleaning fluids, metal and furniture polishes, inks, mucilage, paste, oils, paints.

Dietetic foods.

PHOENIX-HERMETIC COMPANY

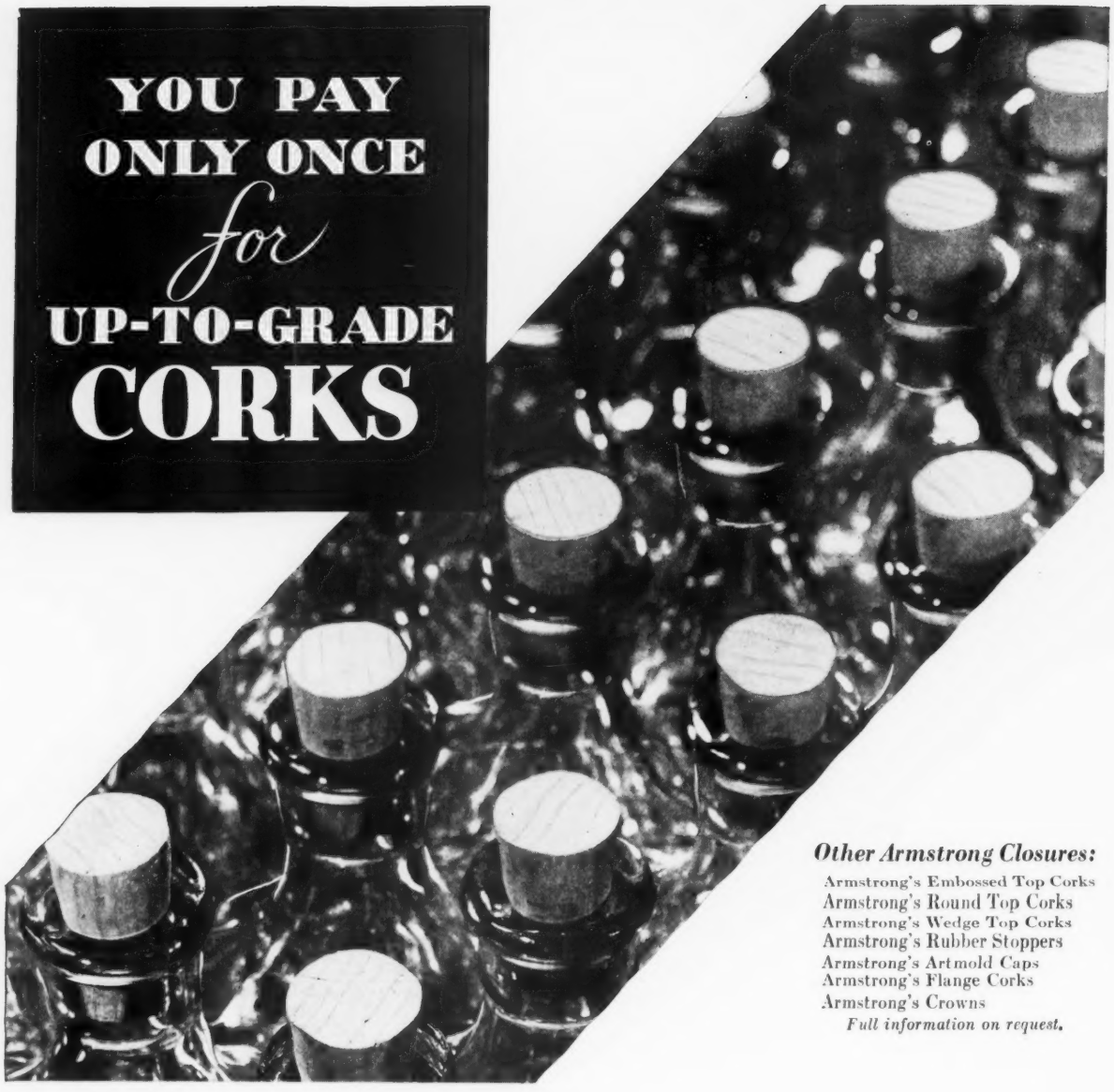
Metal Caps for Glass Packages

CHICAGO NEW YORK

Offices: New York, Philadelphia, Boston, Rochester, Chicago, San Francisco, Los Angeles, Cleveland, Cincinnati, St. Louis
Plants: 2444 W. 16th St., Chicago; 14th Ave. and 38th St., Brooklyn

PHOENIX *Metal Caps*

YOU PAY ONLY ONCE *for* UP-TO-GRADE CORKS



Other Armstrong Closures:

Armstrong's Embossed Top Corks
Armstrong's Round Top Corks
Armstrong's Wedge Top Corks
Armstrong's Rubber Stoppers
Armstrong's Artmold Caps
Armstrong's Flange Corks
Armstrong's Crowns
Full information on request.

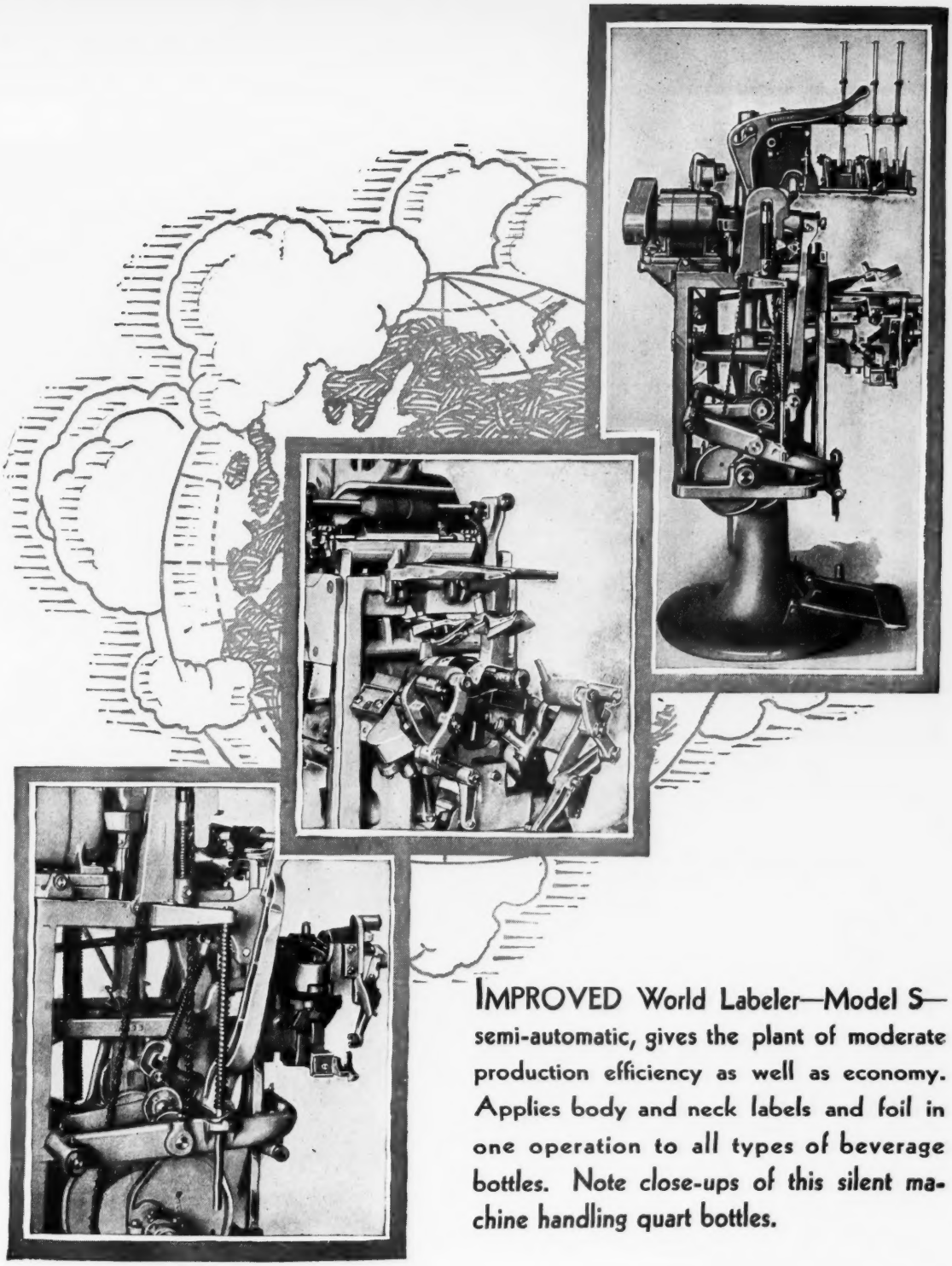
THE cost of up-to-grade Armstrong's Corks ends the minute you buy them. There are no inaccurately cut, or below standard corks to cull out at a loss. Your inspectors will find a minimum of rejects, for every Armstrong's Cork makes a tight seal.

This mechanical precision is arrived at by painstaking manufacture. Only clean live corkwood is fed into the machines that cut and taper these corks to hairline measurements. Polishing, bleaching, sterilizing, these steps are under the guard of vigilant eyes. And the final sorting divides Armstrong's Corks into a set standard of grades which never vary.

If you would see what "up-to-grade" really means, send for samples and prices of Armstrong's Corks, specifying the grade you wish. Ask also about Armstrong's Embossed Top Corks and Armstrong's Artmold Caps, the distinctive closures designed exclusively for your package. If your jobber can't fill your order, we will send you the name of one who can. Armstrong Cork Company, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's Corks

A grade for every need . . . every sack guaranteed

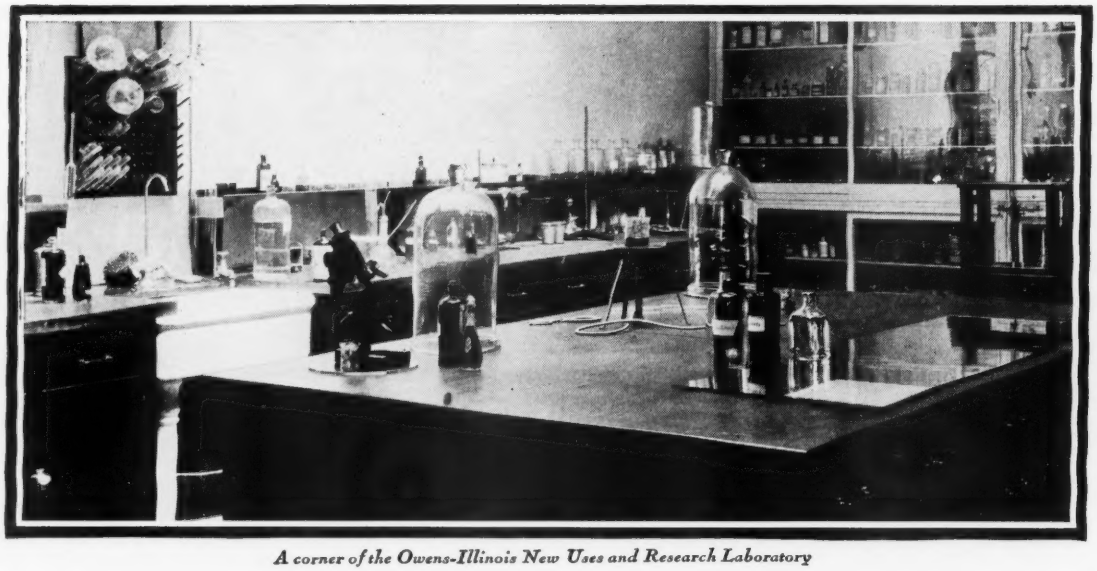


IMPROVED World Labeler—Model S—semi-automatic, gives the plant of moderate production efficiency as well as economy. Applies body and neck labels and foil in one operation to all types of beverage bottles. Note close-ups of this silent machine handling quart bottles.

ECONOMIC MACHINERY COMPANY

Largest Manufacturers of Labeling Machines in the World

WORCESTER, MASS., U. S. A.



A corner of the Owens-Illinois New Uses and Research Laboratory

Using the microscope to increase your profits

Somewhere in your operations there may be hidden profits —profits which cannot be seen unless your questions are studied from an outside viewpoint. Owens-Illinois, through its New Uses and Research Division, offers you the services of an outside viewpoint, but one which is thoroughly familiar with the practical considerations of your own business. ¶ Those who take advantage of Owens-Illinois research are definitely assured of absolutely confidential treatment of the questions and problems under consideration. The laboratory, in this respect, operates under exactly the same professional ethics which would prevail in the case of an independent research laboratory which you might retain to assist you in your business. ¶ The services of our research personnel are at your disposal to help in the solution of your problems.

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We have prepared an interesting booklet about Owens-Illinois research facilities. It is called "Using the Microscope to Increase Your Profits". May we send you a copy?

OWENS-ILLINOIS

BOTTLES

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OF APPEAL

A MAN'S TUBE TO APPEAL TO MEN

Studying each product's individual appeal and interpreting it in terms of color and design is part of New England's service.

And . . . quality materials and quality workmanship make New England Collapsible Tubes as perfect in construction as they are appealing in design.

Our art department will gladly prepare appropriate designs and color combinations for your approval.

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New York Office: 370 Lexington Ave., (Cor. 41st St.)

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Anhydrous
for Fat Extraction
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Drug Markets

Vol. XXVII SEPTEMBER 1930 No. 3

Buy Now!

It is almost a year since stock market values started to crash, and, up to the present time, commodity values have followed suit. But, on the average, there has been less support to commodity values than there has been to stocks, with the result that many natural raw materials of drug trade manufacturers have not only sunk below the cost of production, but have gone below the low levels established in the crash of 1920 when commodities were admittedly in great excess. For the manufacturer who has entered these markets at prices far below those of recent years, there will result an additional manufacturing profit that will partly offset the profit decrease resulting from diminished volume.

But the signs of an upward movement in the prices for these natural products are clearly with us. Roger Babson—the man who not only predicted the crash of last October, but who also predicted a whole year of successive lower markets—now sees the turn. With buying off only ten per cent. during the recent period, and production off twenty per cent., Mr. Babson knows that a resumption of activity is imminent. Likewise Thomas Bassett Macaulay, President of Sun Life Assurance Company of Canada—a company that is the world's largest stock buyer and holder—excepts by the end of this year a recovery of sixty to seventy per cent. of last Fall's losses, and by the end of 1931 or 1932, the peak prices of 1929.

That natural commodities will rapidly follow the path of the stock market goes without saying. That the low prices of this year will discourage cultivation of many crops also goes without saying, with the result that shortages and high prices next year will go hand in hand.

Mr. Babson states that there is an excess of money and the great need is for this money to be placed in circulation. What a beautiful opportunity for consumers of these natural products to take some of their surplus funds drawing three per cent. in the bank, put them into raw materials, creating at one stroke a profitable business deal for themselves, and a real stimulus to business activity.

Alcohol Control It is not uncommon for government regulatory departments to attempt to formulate and enforce regulations that apparently go far beyond the letter and spirit of a law. Also it is not uncommon for industries affected to submit meekly to the dictum of those in authority only to realize at a later date that a strong fight should have been made. The proposed regulations for control of industrial alcohol are of such a nature that any manufacturer of any product containing alcohol can be put out of business almost over night.

A study of the proposed regulations reveal provisions that are akin to the power of multiple seizures held by the Food and Drug Administration. The department requires—among other objectionable features—that a manufacturer of toilet preparations must guarantee that his products will be of such a nature that recovery of the alcohol will be impossible. Furthermore, samples of U. S. P. and N. F. products must be submitted to the department, indicating that even the official products of pharmacy are not free from the present fanatical plan to completely eliminate diversion.

Thus the regulations attempt to push upon the manufacturers the responsibility for proper denaturants in the alcohol. A problem that the department has been unable to solve for over ten years is handed to the manufacturers with the demand that they guarantee to solve it or they get no alcohol. The regulations further provide for the inspection of plants by any peace officer of any state subdivision, meaning that even the town constable can completely inspect plants, processes, formulas, and records of any alcohol consumer.

A sense of humor under all conditions is a fine thing to develop, and the present situation is more than humorous when the real sources of our present day illegitimate liquor supply are realized. But the attempt on the part of enforcement officials to make the industrial alcohol consumers stand the brunt of all official efforts to prove that something is being done, must come to an end. The drug trade can not stand for the proposed regulations, and the sooner the trade makes the enforcing departments realize it, the better it will be not only for the trade but also for those really interested in effective prohibition enforcement.

The Same Method The group method of correcting violations of the Food and Drug Act was the method by which the Food and Drug Administration antagonized the entire drug trade at one time. it was this method more then anything else that united the drug trade for a short time in its fight against the department. By treating cold and flu remedies at one fell swoop and causing ethical prescription products as well as all types of proprietary remedies to change their label statements, the department met with the most united opposition from the drug trade that has been witnessed in a long time.

But despite this fact, the department is resuming the same method of procedure as is evidenced by its newest campaign to check up on claims made for products as antiseptics. In the present instance the department explains that it is not changing the requirements for antiseptics, but is merely checking the products offered for sale to determine if there are any violations.

Perhaps the department will be somewhat less enthusiastic in its campaign against the various groups. Perhaps it will not go so far as it did in the past when it required that such products as cold tablets made only for prescription purposes be described by their components rather than by the ailment for which they were to be used. Perhaps the department will make a number of changes that will allow it to be far more effective in its work of eliminating obvious frauds, rather than in the work of harrassing those reputable firms which are honestly trying to conduct their business to the best of their ability.

• • •

Plants Will Improve With the resumption of business activity that is now arriving, manufacturers will again concern themselves seriously with problems of production. When plant capacity is in excess of sales it is difficult to seriously concern oneself with improving methods of production to the end that more goods can be turned out. Even the economy of production and lower overhead is not sufficient stimulus to invest large amounts of money in new equipment when business is on the downgrade.

But let the orders show an increase, and let general conditions show a general improvement, and watch manufacturers become freer in their expenditures. Under active market conditions manufacturers are willing to invest money that will bring a favorable return, but under poor business conditions they would rather take the insignificant return that the bank offers.

They Won't be Stopped

While the ergot controversy may be considered finished as far as the manufacturers of the drug trade are concerned, final answers are being made by the various sides in the affair. Within the month the American Medical Association has made its final statement to the physicians; Dr. H. H. Rusby has taken up the pen to state his position in "Plain Talk"; and Senator Royal S. Copeland of New York, has written to Walter G. Campbell, chief of the Food and Drug Administration, congratulating Mr. Campbell in the names of Senators Copeland, McNary, and Hatfield—three of the investigating senators.

That this controversy will ever die until those vitally interested in it are gone, is not anticipated by anyone acquainted with it. Those who have attacked the drug trade, the Food and Drug Administration, and the American Medical Association will continue to rant as long as anyone will listen to them, and there will always be people unacquainted with the facts, who, for a time, will be impressed by the shrewd manner in which the complainants present their case.

It will not be right for those concerned to ignore entirely the effect of this ranting. Rather should an effort be made to educate those people who need education as they are misled by the garbled statements of those who destroy the confidence of the public in those who are safe-guarding its health.

• • •

Are Doctors Exempt?

The Fall meeting of the American Chemical Society not only resulted in rather complete discussion of the latest progress of medical science, but at least one scientist addressing the society did not refrain from voicing his opinion regarding what he considers a fake cure by means of which the public is being swindled. The criticism was leveled at the Medical Association of the State of California for its publication of the treatment of cancer by glandular therapy.

The famous or (infamous) clinic in California at which the two doctors who originated this method are treating all the people they possibly can handle has come in for criticism from other quarters. It would seem that it is about time that the A. M. A. reported on this case either favorably or unfavorably. Merely because the men in question happen to be doctors is no reason why—if the A. M. A. fails to act—some government agency should not step in and determine whether or not swindle is taking place.

Drug Concessions?

With the Kroger Grocery & Baking Company preparing to operate grocery, meat and produce departments in two of the Sears, Roebuck & Company stores, drug manufacturers had best stop and think just how such a trend in the drug trade would affect them, or whether the manufacturers themselves will take the step to have special departments opened for their goods established in various large stores.

Suppose for a moment that the large drug chains take over the drug and toilet goods departments of the various department stores throughout the country on a consession basis. Such a plan is well within the range of probability, and indicates clearly that the distribution problem is far from settled at the present time. How much consumer acceptance such a plan would cost any manufacturer would largely depend upon the ability of the chain to displace advertised goods with goods of its own manufacture. But still the department stores are far from slow in employing chain store tactics at the present time.

Ten Years Ago

From our pages September, 1920

Dabrooks Perfume Co., formerly owned by Michigan Drug Co., Detroit, has been purchased by William R. Warner & Co., of St. Louis, Phila. and New York. The laboratory will be moved to St. Louis, and the sales will be handled by the Warner organization.

The Calco Chemical Co., 136 Liberty st., New York, is completing the erection of two additions to its plant at Bound Brook, N. J. to cost about $125,000. The additions will house the pharmaceutical department and the Nigrosine plant, which were formerly located in the company's plant at Newark, N. J., recently sold to the Tower Manufacturing Co.

During the convention in St. Louis of the National Association of Retail Druggists, Sept. 20-24, Meyer Bros. will provide one of the most elaborate entertainments ever given by a commercial house for those attending the convention. The firm expects to entertain 6,000 persons.

D. W. Jayne tells us that the Government had such large quantities of phenol left over from war manufacture, which it is gradually disposing of at a fixed price, that there is really no other phenol sold.

Richard C. Stofer, president of the American Drug Manufacturers Association and for fourteen years president of the Norwich Pharmacal Co., died after an illness of two months.

The employees of Procter & Gamble will elect three of their number to the Board of Directors of the company. Five employees will be nominated in the primaries in each of the three plants of the concern.

Commissioner Kramer, of the National Prohibition Section of the Bureau of Internal Revenue, says the permits issued to proprietary medicine manufacturers to withdraw whiskey and alcohol are being abused and will not be re-issued.

Yours to lessen Fire Hazard—

Illustrated here is the Canco No. 82, 13⅝ x 10 3/16 x 14½, furnished in green, walnut, oak or mahogany. We have available also the small size corrugated basket No. 160, 12½ x 9½ x 11¼, also No. 480, 15¾ x 12⅓ x 18, a larger corrugated basket. Both of these baskets can be had in either green or white.

A superior line of METAL WASTE BASKETS made by the American Can Company

Did you know that Canco builds a complete and supremely handsome line of metal waste baskets? There is a type and size for every purpose—in the office or the plant.

Fire hazard—that one reason is enough for changing to Canco baskets. Sturdily built of metal throughout they will protect your property—and last for years.

Canco baskets are furnished in rich finishes of oak, walnut and mahogany—solid white and solid green, plain or corrugated. Your office supply people carry them, or can easily get them. Worth getting the Canco kind—for beauty, economy, protection.

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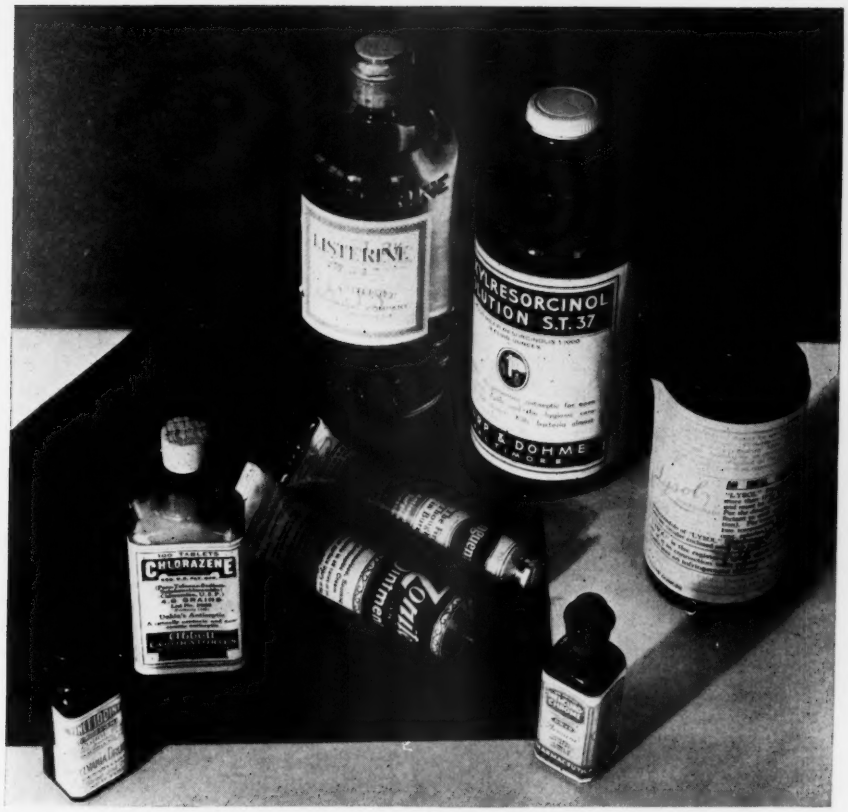

An Antiseptic

What is it?

We interview Dr. James J. Durrett on just what requirements are necessary to use the word "antiseptic" on a label.

WHEN is an "antiseptic" really not antiseptic in its action ?

This is one of the questions to which the office of Drug Control, Department of Agriculture, is addressing itself in a new campaign on alleged antiseptic preparations that has been undertaken under the leadership of Dr. J. J. Durrett, Chief of Drug Control.

In connection with a check-up on such preparations, samples of some 1,200 preparations have been examined by Dr. Durrett's associates, with a view to seeing whether their labels are accurate.

"We intend to see that alleged antiseptic preparations comply with the law," declared Dr. Durrett to Drug Markets representative. "If they are labeled with antiseptic claims they must make good as antiseptics. If truly antiseptic they must be able to destroy bacteria when used as directed on the label, or in the case of ointments or salves or material used in compresses or packs and applied continuously for a period of 24 hours they may be called antiseptics if they merely inhibit the growth of bacteria."

"Are there new standards for antiseptics established by the Department or to be applied in connection with this check-up on the situation ?" Dr. Durrett was asked.

"No, not at all," he replied. "The Food and Drug Administration undertook the project of dealing with alleged antiseptic preparations about four years ago.

There has been no change in our requirements or in the standards set up for complying with the law, as compared with the official announcements of the department made during that period."

There has been rumor in trade circles that the department's requirements have become so strict that some very well-known named preparations making antiseptic claims would be practically put out of business. As to such rumors Dr. Durrett merely smiles and remarks that all such preparations must be labeled in accordance with the law.

"If alleged antiseptic preparations do not comply with the law and department regulations," said he, "the department will proceed against them in court. There will be seizures, as there have been in the past."

Dr. Durrett went on to say that there have been a number of seizures of alleged antiseptics in the past which were held not to comply with the law's requirements. Some of these seizures were based on therapeutic claims made for certain preparations. In fact, it has been said by critics of the department that no alleged antiseptic preparations have been seized solely on account of antiseptic claims made for them.

Therapeutic Claims

"That is not a fact," declared Dr. Durrett, referring to this last statement. "There have been some seizures of alleged antiseptics solely on account of false antiseptic claims made for them, on their labels. But there have also been seizures made of alleged antiseptics on account of therapeutic claims made for them. If an alleged antiseptic mouth wash or throat gargle claims to cure tonsilitis or diphtheria, for example, obviously its label does not comply with the law unless that preparation really makes good on the claim. Naturally such preparations are subject to seizures, and some of them have been seized, as others will be seized if they do not meet the requirements.

"The Food and Drug Administration has followed the policy of giving ample notice to the trade," continued the Chief of Drug Control. "The trade has been advised what the requirements are, in the hope that there will be co-operation with the department. There has been such co-operation to a considerable extent. Many manufacturers have changed either their labels or the formulas of their products in order to comply with the law. These will not be disturbed. But others which have not complied with the requirements will be compelled to do so. The time has come for action."

Dr. Durrett was asked a number of questions about details of the tests made by the department and the standards set up in the case of alleged antiseptic preparations. Reference was made to a paper by Dr. Reddish in which it was stated that different antiseptics affected different germs, bacteria or bugs differently and in different lengths of time, and questions were asked whether a preparation could be labeled antiseptic if it would kill certain bugs, but not other bugs, or whether it was necessary for it to kill *all* bugs.

The substance of the department's reply to such questions as the last is that a preparation may be labeled antiseptic if it will kill or inhibit certain bacteria when used in the manner and for the purpose for which it is intended. Thus, a preparation labeled antiseptic for use in treatment of an open wound might not be antiseptic if used as a mouth wash, for the reason that different bacteria may be present in the wound than those present in the mouth. It does not appear that the use of names of specific diseases on antiseptic labels is generally approved, any more than is the use of the names of diseases on medicines or drug products intended for internal administration.

Period of Time Arbitrary

At the request of Drug Markets, Dr. Durrett described some of the methods of the Food and Drug Administration with reference to alleged antiseptics.

"Our bacteriologist takes a sample of a preparation," said Dr. Durrett, "makes a solution of it in accordance with the directions on the label and subjects the bacteria which it is claimed to destroy to its action. The bacteria is subjected to this action for a period of five minutes, in a test tube."

"Right there," he was interrupted, "why five minutes ? Why not a longer or a shorter period ? Who is authority for this time limitation and what is its significance ?"

"Five minutes was decided upon by the Administration as a convenient period in which to test alleged antiseptics, to see whether they kill the germs they are supposed to kill," replied the Chief of Drug Control. "If the germs are killed in the test tube within that period, then the product may be legally designated as antiseptic. Five minutes is an arbitrary period for such tests, but it is a generous time and operates very leniently upon the manufacturer. This is true by reason of the fact that in the case of mouth washes or throat gargles, for example, the preparations are not retained in the mouth or throat, as a general rule, for anything like five minutes. Ten or fifteen seconds is a more likely average for such retention, except, perhaps, in the case of a limited number of preparations that might be intended to be rubbed on the gums or might be used by a dentist on his patient for antiseptic purposes."

Dr. Durrett made clear that the five minute test of a preparation in a test tube "does not take into consideration the conditions under which that preparation is actually used in many instances. Many preparations that may be antiseptic in the official tests is a tube may not be antiseptic in their action, for example, during the few seconds that they may be retained in the mouth, partly by reason of dilution with saliva," said he.

Dr. James J. Durrett, Chief of the Drug Control, who is directing the work on antiseptics

"However, we will let them be said to be antiseptic because we have not got the means of denying the manufacturer the right to call them such. If a preparation kills bacteria in five minutes in our test tubes we will have no quarrel with its manufacturer if he says it is antiseptic, although the conditions of its use may be entirely different from those prevailing in the test tube."

Dr. Durrett pointed to research work carried on at Johns Hopkins University into the question of the merits of alleged antiseptic preparations, which apparently showed that as a result of experiments with a number of the best alleged antiseptic mouth washes and gargles that were dropped into the noses of rabbits, that they do not destroy disease germs, but that in some instances actual increase of such germs occurs. The experts concluded, according to Dr. Durrett, that "there is no possibility of freeing the upper respiratory passage of disease-producing germs by treatment with antiseptic solutions;" and that, on the other hand, "great harm can be done by putting irritating solutions into the nasal passage."

Gargles Act Mechanically

Dr. Durrett expressed the belief that in the case of many mouth washes and gargles claimed to be antiseptic, their action is simply mechanical. They do not get down into the innermost recesses where germs are likely to lodge and multiply, in the few seconds such preparations are kept in the mouth, he declares, but he believes that they may remove a certain proportion of such germs from the more open surfaces of the mouth and upper throat.

"I can get the same result," he said, "by using a solution of baking soda or of common salt. There is no antisepsis in such case, but simply a mechanical action. It is like washing a spot of dirt off of the hand by using soap and water. Yet there are extravagant claims made for certain preparations, on the ground that they are antiseptics, because they do this very thing."

Taking up ointments, salves and other preparations that are officially recognized as antiseptics if they inhibit the growth of disease germs, Dr. Durrett made it clear that they must be applied continuously for a period of at least twenty-four hours, in order to come within that definition. "If the preparation is taken off or a bandage containing it is opened up," he said, "the antiseptic action of the preparation is weakened. It will not prevent germs, and germs are not killed by that process. The application of the preparation must be continuous for at least 24 hours; otherwise it may not be called antiseptic."

It has been reported in trade circles that preparations containing a large percentage of alcohol may be considered antiseptics. Dr. Durrett was asked about this matter. His reply follows:

"Certainly a preparation containing 80 or 90 per cent. of alcohol is antiseptic in its action, provided the other 10 or 20 per cent. of its contents is water. In fact a preparation containing 40 per cent. or more of alcohol, or even down to 33 per cent. alcohol, the remainder being principally water, may be regarded as antiseptic. I am not so sure about this point if fat, oil, or certain other ingredients are substituted for water."

The Better Business Bureau not long ago issued a statement about alleged fake antiseptics, as did the Department of Agriculture issue one entitled "Fake Antiseptics and the Law." Department officials comment that the Better Business Bureau has some of the alleged fake drug and antiseptic manufacturers worried.

De-bunking Advertising

Not content, apparently, with compaigning actively against the labels of alleged antiseptic preparations, the Food and Drug Administration appears to have embarked upon a fight to de-bunk some of the general advertising of such preparations. This is indicated in a recent radio talk by Dr. Durrett about the application of the food and drug law to products labeled as antiseptic mouth washes and gargles. At the outset of his talk he admitted that "the labels of widely distributed antiseptics are at this time comparatively accurate in their claims. Unfortunately for the consumer," he added, as much can not be said for the newspaper and magazine advertising of mouth washes and gargles. Making it plain that such advertising is not subject to regulation by the food and drug law, Dr. Durrett drew comfort from the fact that "the Federal Trade Commission is proceeding against this type of abuse of public confidence" and that the Better Business Bureau "is also discouraging fraudulent advertising."

Dr. Durrett declared that the public was being "persuaded, urged or frightened" by advertising, into using various preparations in the belief that they will thereby become safe against the germs of thirty to fifty diseases which the manufacturer states start in the mouth, nose or throat. In reply to this implication, Dr. Durrett cites the Johns Hopkins research results above referred to. He says that "meaningless jargon, purporting to be scientific facts" is used in advertising to impress those seeking an antiseptic mouth wash and gargle. He cited a recent statement

(Continued on page 309)

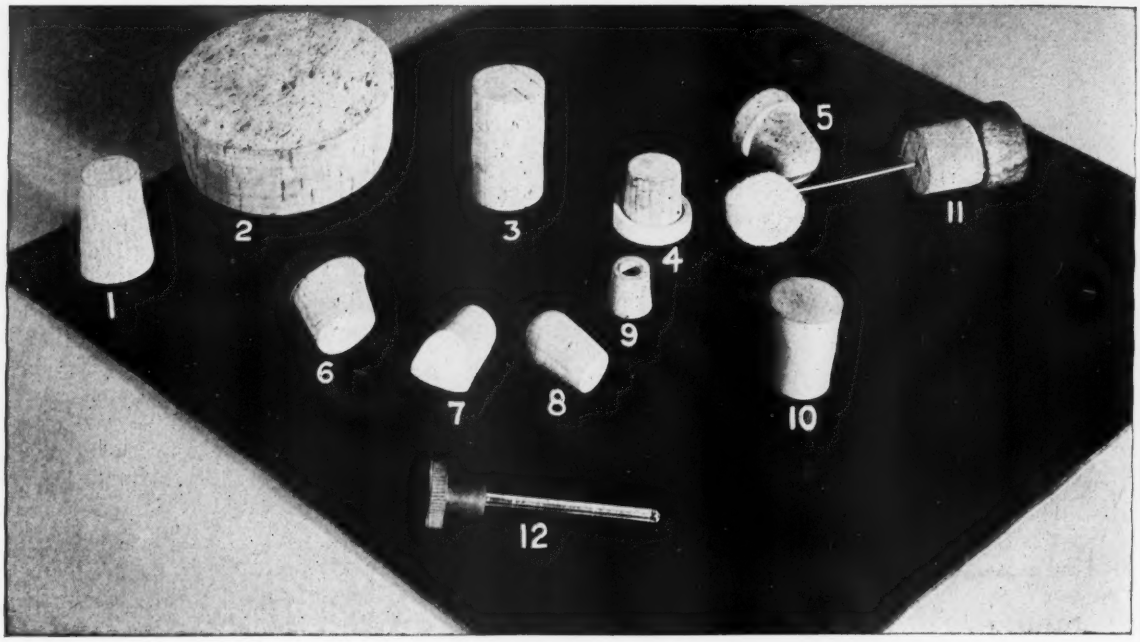

Fig. 1

Closures for Glass—

"WHAT closures are best suited for my product ?" Some packers ask themselves this question and are stumped from the start; others ignor it entirely and blunder upon the first stopper that comes to their mind; still others make it a serious study and are rewarded by a better preserved product, less leakage and a more attractive and serivceable package. In this discussion of closures for narrow mouth containers, we shall take the packer's angle, and clear for him, as best we may, this perplexing closure problem.

In most cases more than one type of closure will serve a particular purpose, and therefore individual characteristics of all closures will be outlined. Originally any product placed in a narrow mouth container was retained by means of the stopper. This developed from a tapered section of natural cork into an extremely ornamental and useful closure. There is shown in figure 1 a series of cork stoppers. The tapered stopper (1) is the most common form, and its action is familiar to every one. Products which are constantly being used and which are more or less impervious to atmospheric conditions are best sealed with this type closure because of the ease of reseal. In cases where a hermetic seal is required the quality of the cork must be good. If it contains many connecting air spaces, "breathing" may occur. To offset this a special type of protective coating, made from cellulose products, is applied to the cork. This material comes in the shape of a cap which is dropped over the cork in a moist condition, and as it dries out, it shrinks tightly over the neck and stopper.

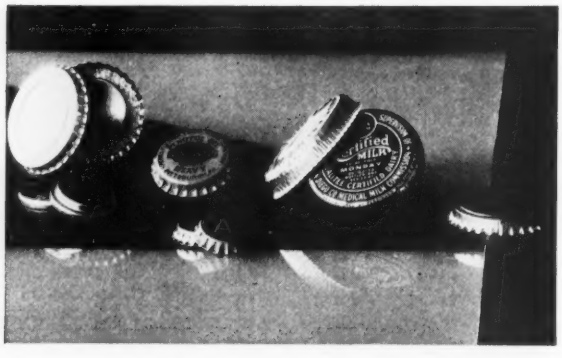

Fig. 3

When a product is packed in an exceptionally large container, a larger size stopper (2) may be employed. It is simply a tapered stopper made of high quality cork. In the case of beverages or other products which are to be stoppered under pressure, the straight stopper (3) is serviceable. This will fit well down into the neck of the container and withstand high internal pressure.

For bottling a commodity that must have more than the ordinary care due to perhaps rough handling or the likelihood of staining, special stoppers (6, 5, 6)

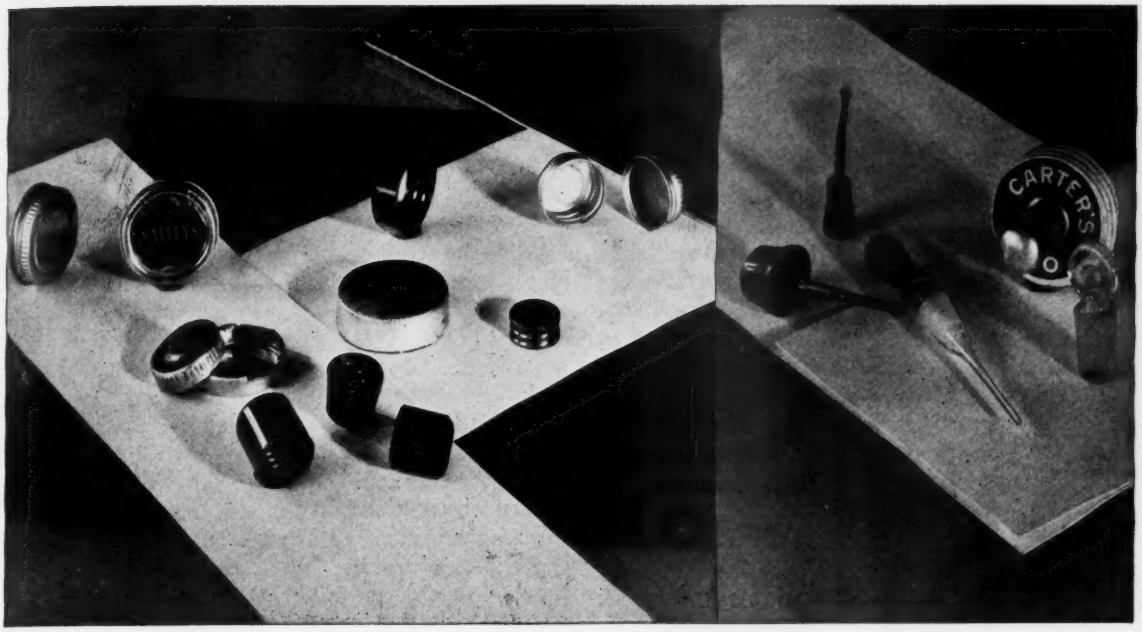

Fig. 4 Fig. 7

—the Narrow Mouth

are commonly used. The wood, cork or composition top is added to make a closer fitting seal which is not easily dislodged. An appeal to the artistic is made through cork stoppers fashioned in out of the ordinary shapes (7, 8). Some decorative coating is often applied which adds to the appearance.

Every one who is interested in packing meat sauces or vinegar will recognize the cork shell (9) used in conjunction with a glass top in sprinkler top bottles. Ammonia and strong chemical solutions are usually stoppered with a rubber seal (10). When a bottle contains substances such as shoe polish or a solution which is used carefully and sparingly, a stopper of cork or rubber (11, 12) allows for application with the minimum possibility of undesired contact and waste.

Such commodities as iodine, manicure preparations, mercurochrome, etc., which are likely to evaporate or stain, can be effectively sealed with stoppers such as are included in figure 2. Their important feature is the employment of an inside thread instead of depending upon friction between the stopper and the glass. In the case of such products as mentioned there is added an applicator rod which is moulded in one piece with the seal and stopper. The illustration shows the clear glass stopper with an outside thread which is brought in contact with the top surface of the container by the action of the screw thread. Mineral oils, liquid shampoos, etc., are examples of products using this latter type of stopper. Other types are made of porcelain and composition materials such as Durez and Bakelite.

The bottler of carbonated beverages, pasteurized milk, chocolate milk drinks, distilled water, etc., needs no introduction to the crown type of cap. It hardly seems necessary to say anything about its application or removal. It consists of a single piece of metal with a turned over, flutted skirt which is forced down around the finish of the bottle by the action of a metal throat through which the cap is forced. The seal is made against the top surface. The cap is applied with high head pressure, thereby compressing the gasket or liner which in the ordinary crown is a compo cork or

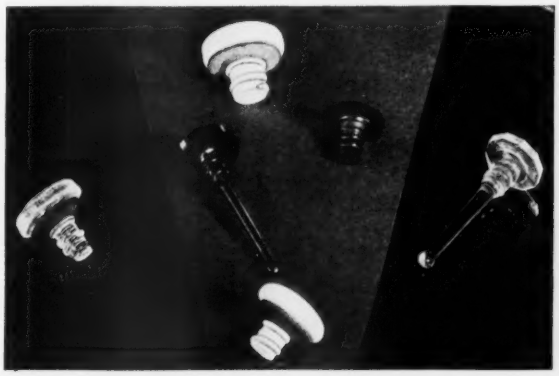

Fig. 2

natural cork disk. This particular closure, because of the crimping action under the ring forming the finish, will withstand very high internal pressure, and therefore is used almost universally as a closure for carbonated beverages.

Several varieties of crown caps are illustrated in figure 3. The one shown at the extreme right is a modification of the ordinary crown, known as the super crown. This particular closure has a long skirt and the gasket is a rubber ring which seats against the ledge on the outside of the top, giving a double seal. This particular closure because of the long skirt can also withstand considerable internal pressure. It is made in sizes from 44 mm. to 80 mm. which really puts it in the wide mouth class, but as it was developed from the ordinary crown closure, it is included in this article. Figure 3 also pictures a small size anchor cap which will fit the crown finish.

Another cap, designed for use on milk bottles, and known as the Saniseal, shown in figure 3, is essentially a crown, though somewhat altered to suit the milk bottle finish, and serve as a protection for the lip. This is easily removed and can be used as a cover cap in place of the paper.

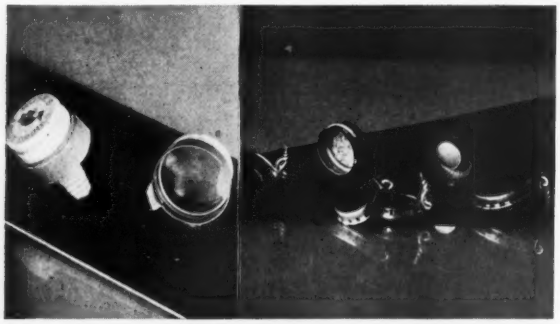

Fig. 6 Fig. 5

A manufacturer usually has two or three factors to take into consideration when selecting his closure. If he depends chiefly upon the appearance of his product, as a sales factor, he must have a closure that is especially harmonious to the container and product insofar as size, shape and finish are concerned. If, on the other hand, service and easy access to the commodity are prime considerations, he must pick a closure that is of sturdy construction and able to withstand much usage without sacrificing an attractive appearance. Perhaps for competitive reasons, it is necessary for him to keep down the price of his product, in which case he will want an inexpensive yet reliable closure. Whatever the requirement may be, he can secure among others a variety of closures of the screw cap type. This form of closure has long been a popular one. Products ranging from beauty preparations and medicinal oils to sauces and dressings besides countless other articles are sealed under various screw caps. Such caps are made from tin plate, aluminum, brass, nickel plate, Bakelite, Durez or composition materials utilizing several kinds of liners. They range in size from 14 mm. up to 38 mm. Both the C T cap and the divided thread cap are available in sizes for narrow mouth containers. Three other types of caps, the R O which is applied to the screw finish, the Goldy seal and the Upressit cap, are also made in small sizes for narrow mouth containers.

While the screw caps are used for a great diversity of products, there are, however, some unique caps which have special features making them exceptionally efficient in satisfying exacting requirements and personal tastes. One example is the Williams Kork-N-Seal (figure 5). Containers for products of an oily character, use this rather unusual type of closure. The Williams cap has a perforated metal skirt with the ends of the flaps rolled over to secure a metal wire run through the skirt and hooked at each end. A heavier wire, so made that by turning it down the wire in the cap is drawn together, firmly clamping the skirt of the cap in against the finish. When this cap is applied, head pressure forces the glass up tightly against the gasket or liner and a device pushing down the metal, clamps the cap on securely. To remove the cap it is only necessary to pry up this lever which loosens the wire and the cap is free to be removed.

To seal bottles containing powders and similar dry products, there has been evolved a heavy paper seal. This has a cork shape center which fits into the neck of the bottle and continues up and over the edge of the mount. The paper has tiny corrugations which give it elasticity and hold in against the top ring of the bottle. To remove this the edge of the cap is gently forced up (see figure 5).

A cap known as the Sterling Closure employs 3 or more lugs to effect engagement with the bottle. A downward pressure is applied at the time the cap is rotated ¼ turn to a stop. While the cap is still under pressure the annular ring is compressed slightly, after which the pressure is removed and a seal results. The cap can be removed by hand and provides a reseal (see figure 5).

The Save-a-seal and Super seal caps are special types of narrow mouth closures designed so that they can be removed without destroying the reseal possibilities of the closure. The Save-a-seal utilizes the top sealing surface, and the Superseal is essentially the same cap but with a modification of the closure so that a ledge below the top seal is employed rather than the top sealing surface. This closure is secured to the container by rolling under the lower edge of the skirt. A metal tab permits the lower edge of the skirt which is scored to be drawn off, thus freeing the seal. This cap may be slipped over the top of the container as a reseal.

On products where it is desired to show that the contents have not been tampered with, a seal used in connection with the R O closure is employed such as

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Col. Amos W. W. Woodcock (left) now has equal say with Commissioner Doran (right) in the granting of alcohol permits. Under the proposed regulations, alcohol consumers would have to prove to Mr. Woodcock their legitimate needs five times in one year

Alcohol Regulations Stir Manufacturers

Reputable manufacturers would place themselves in jeopardy of being branded illegitimate and having their reputations as well as their businesses destroyed without reason, is the opinion of those who have studied the regulations proposed to make the dual control of the Williamson bill effective.

SO FAR as manufacturers of drug trade products are concerned, the new regulations proposed for the joint control of industrial alcohol by the Department of Justice and the Bureau of Prohibition of the Treasury Department are not only unreasaonable in many of the additional forms and records that permittees are required to furnish, but they are of such a nature that they will place an absolutely honest consumer of alcohol in a position that will leave him open to totally unwarranted and unjustified attack and embarrassment at any time that an official of either regulatory department desires to attack or embarrass him."

So spoke a prominent member of the drug trade when questioned regarding the proposed regulations that were to have become effective September 1 except for the action of James M. Doran, commissioner of industrial alcohol, who has decided to wait until the industries affected by the regulations have voiced their opinions.

"By the proposed regulations, a demand is being made upon the trade," stated another large consumer of alcohol, "to have it shoulder the responsibility of enforcing the law. The trade can not and should not shoulder this responsibility."

This statement was made with particular reference to the provision in the new regulations that a manufacturer of toilet goods agrees in his permit application that his products will be of such a nature that either before or after saponification the alcohol can not be removed by distillation in a drinkable form. It is this provision upon which the drug trade in particular is centering its fight, although many other features of the new regulations are most objectionable and vicious from the point of view of the manufacturers of drug trade products.

Stated another manufacturer with reference to the aforementioned provision:

"Government chemists have been striving for many years to improve their formulas so that the denaturants can not be removed. If they have not been able to solve this problem after all their effort, how do they expect the manufacturers of toilet goods to solve it? Consuming manufacturers have quite enough difficulty adjusting their manufacturing formulas to meet the new ideas of the department with regard to proper denaturants, without being responsible for the very formulas themselves. If manufacturers can not operate under specific formulas as laid down by the department, how can they operate at all?"

Pharmacopoeia Not Safe

"It is well within the range of probability" stated a manufacturer of both drug products and toilet preparations, "that the regulations might be changed at an early date to include the same sort of provisions for other than toilet preparations. Many antiseptic and other drug products high in alcohol content might be brought under this provision. It is stated in the new regulations that samples of U. S. P. and N. F. preparations to be manufactured must be supplied to the department. This is a new departure and evidently means that the prohibition enforcement officials might go so far as to rewrite our official standards for drug products if any of these products lend themselves to recovery of a drinkable alcohol by the man who buys the products in pint bottles or less and at the same time supplies himself with a still.

"It appears ridiculous when one considers the retail, or even the wholesale, price of bottles of toilet preparations, that any large recovery of alcohol could be made in this manner. If, as the regulations state, toilet preparations are not to be packaged over one gallon, and the sale of these products is restricted solely to ultimate consumers, barber shops, beauty shops, general retail stores, and wholesale and retail drug establishments, why is it necessary to require that the formulas of the preparations be "bomb-proof" so far as recovery of alcohol is concerned?"

"The fundamental reason why these regulations should be fought to the last ditch," stated a manufacturer of a proprietary medicine, "lies in the fact the department forces users of alcohol like ourselves to agree to absolutely unreasonable and dangerous provisions if we want to continue in business. The department forces any new provisions upon the trade by merely including them in the permit renewal applications that the permittees must sign if they are to get alcohol at all. There is no time to go into court and fight these provisions although they are contrary to the intent of the law. The manufacturer must sign what is submitted to him and take what comes. He has the choice of going completely out of business at once, or continuing until the department seeks to close him down for some reason that does not have to be proven until his business has vanished.

"Another equally dangerous provision of the new regulations, and one that is agreed to by the permittee in his application, is that by which the permittee agrees to allow his records, his plant, his processes, and in fact everything to be inspected not only by prohibition officials, but also by any police officer of any state subdivision. This means that any town constable can go into a manufacturer's plant and obtain all the information regarding a man's business that there is to obtain. Beside creating additional annoyance to the manufacturers, such a provision opens the door to the theft of information through bribery of police officials."

There is no intent on the part of reputable manufacturers who are opposing the new regulations, to aid in any way the illegitimate firms who are diverting alcohol. For by so doing, these manufacturers realize that they allow to stay in business, firms that create destructive competition in the market for manufactured goods. But at the same time these manufacturers fully realize that under the proposed regulations, they, themselves, might be branded illegitimate merely because they have been forced to agree to do something that is impossible of accomplishment, and also because they have been forced to agree to open their private information to any firm that cares to buy it.

Five Applications per Year

But aside from these vicious provisions in the new regulations, there is a change in the permits themselves that makes the matter of obtaining alcohol doubly complicated. Heretofore, a manufacturer obtained a basic permit which gave him permission to obtain a specified number of gallons throughout the year. When the manufacturer wanted to obtain this alcohol he obtained a withdrawal permit. This withdrawal permit was given to him without question and was necessary for no other reason than that the department would know when the alcohol had actually been transferred to him. But under the new regulations the withdrawals are not to be given unless the manufacturer again proves that he is entitled to the alcohol. The withdrawal permits are only for a period of ninety days. Thus a manufacturer must prove his right to the alcohol he requires five times in one year instead of once a year as was formerly the case.

Drug trade associations who fought the Williamson bill when it was proposed were merely fighting against the delay and additional detail and bother that the dual control would bring. The department has sought to overcome the ten day period that manufacturers would have to wait for the approval of the Department of Justice by limiting withdrawal permits to ninety days as explained above. But, while the manufacturer can get part of his alcohol without

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Selling Drugs in Chile

American manufacturers are releasing to Germany a large part of the Chilean market that came to them during the war. Mr. Gracey indicates how this can be regained.

By Wilbur T. Gracey

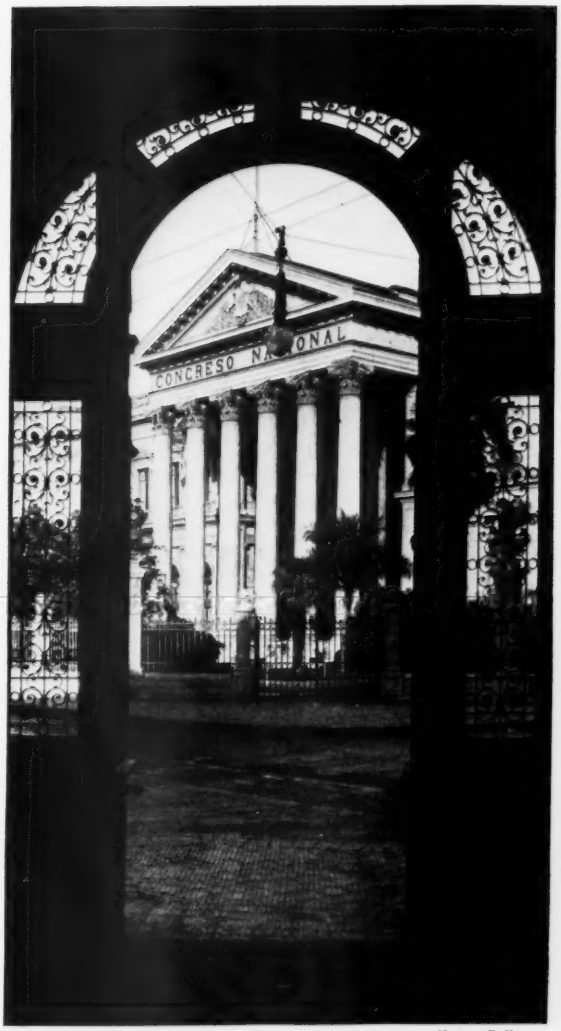
ALTHOUGH Chile stretches for 3,000 miles, from the tropics to the Straits of Magellen along the Pacific Coast of South America, 35% of the country's population is located in 5% of the country's area. This heavily populated area is the Central Valley,—an agricultural region, crossed and recrossed by numerous fast-flowing rivers.

The following table gives a clear idea of the importance of the drug trade. Medicinal and pharmaceutical products hold third place in chemical imports, being exceeded only by explosives and industrial chemicals. Medicinal and pharmaceutical imports amount to approximately a million and a half dollars annually. Adding to this the value of the essential oils, synthetic aromatics, perfumery, crude drugs etc., makes an import trade of over two million dollars, which is certainly of interest to our manufacturers.

Chilean Drug Trade Imports

	1923	*1927*	*1928*
Medicinal and pharmaceutical preparations	388,000	1,018,000	1,437,000
Essential oils, synthetic aromatics	68,000	174,000	285,000
Perfumery, cosmetics, toiletries	98,000	253,000	282,000
Insecticides, disinfectants	36,000	199,000	186,000
Crude drugs, waxes, natural dyes, botanicals	16,000	68,000	53,000
Total	606,000	1,712,000	2,243,000

Amongst the drug products, the most important item is pastilles, lozenges and medicinal pastes—shipped from France, Germany and the United States amounting in 1928 to $314,000. Next in importance are medical specifics—including salversan—principally from Germany, valued at $121,000. Diverse medical specifics accounts for an additional $147,000—about half from the United States. Of the capsules, pills and wafers, $143,000—we also supply about half. Bacteriological serums, ointments, alkaloids,



Ewing Galloway

Chilean Hall of Congress through an arch

medicinal oils, plasters, and similar items made up the balance.

Of the annual imports of medicinal and pharmaceuticals to Chile, we supply about 30%, France approximately 30% and Germany about 20%.

The French, as in other South American countries, enjoy certain advantages, owing to the fact that most of the physicians are educated in France, and are more familiar with the French pharmacopoea. As a consequence, that country leads in the exports to Chile of tonics; blood remedies; nerve, kidney and liver medicines. Also in perfumes and face powders, hypodermic injectives, pastiles and salves.

Our strongest sales are in the lines of cough, cold and grippe remedies, purgatives, hygenic preparations, medicinal salts, serums and cultures, pomades, ointments, plasters, capsules, pills, antiseptic gauze, and petroleum derivaties.

A large proportion of the Chilean population is engaged in mining, and as a result, there is a large market for ointments and linaments for cuts, bruises and sprains.

Local Manufacturies

In recent years—especially since the war—the development of Chile's manufacture of prepared medicines has been rapid. A revised tariff—which went into effect nine years ago—gave the local manufacturer protection against imported goods. To meet this competition, a number of American and European manufacturers arranged to make their products in Chile. Of course the raw products still have to be imported, but as the duties on these are not of a protective nature, American and European manufacturers with local factories, can compete successfully with the Chileanos. The present manufacture amounts to about half a million dollars annually.

The domestic production of toilet preparations is considerable, although data as to the value cannot be given. The success of the industry is due to a high tariff on imported goods, but is confined to low and medium priced articles, and the market still exists for higher-grade foreign goods.

A law passed in 1925, imposes a tax on pharmaceutical specialties, perfumes and toilet articles. It also provides that after it has been in force for five years (1930) no pharmaceutical specialty will be allowed to enter the country unless the Director of the Board of Health has previously certified that it is necessary for the public health.

The customs import duties on drugs and pharmaceutical products is doubled when the formula is not printed, or stamped, on the wrapping of the container, or deposited beforehand with the Institute of Hygiene. The sales tax which is imposed, is also about double for imported products, as for those of domestic manufacture. All manufacturers, importers or representatives must register themselves and the products which they import, or sell, with the department of internal revenue. The publication of advertisements which do not clearly indicate the basic composition of the medicines they advertise is prohibited.

The exports from the United States for 1928—the last available statistics—were as follows:

Medicinals	342,000
Toilet preparations	71,000
Crude drugs, essential oils, etc.	14,000
Glycerin	2,000
Petroleum jelly	1,000
Household insecticides	122,000
Biologics	17,000
Medicated plasters	17,000
Medicinals for internal use	242,000
Other non-coal-tar medicinals	17,000
Perfumery and toilet waters	4,000
Talcum and toilet powders	7,000
Creams, rouges and cosmetics	3,000
Dental creams	40,000
Other dentifrices	7,000
Other toilet preparations	6,000
Peppermint oil	1,000
Other essential oils	8,000
Crude drugs	2,000
	923,000

Competition

The total population of Chile, variously given as between four and five million, consists of about 1,500,000 whites; 2,000,000 *mestizos*—mixtures resulting from the intermarriage of Spanish and other European nationalities with the natives—and about 1,500,000 Indians.

To supply these people with drugs there is very keen competition. During the war—and the years following—we acquired a prominent position in the trade, and have succeeded in holding it, but the past two or three years have seen a phenominally successful "come back" by Germany.

British importers owe much of their success to their splendid system of distribution. Their merchants and agents are established all over the country and handle British goods whenever possible. Their goods are high in quality and in price, and they are handicapped —as we are—by increasing quantities of cheap imitation products.

A certain percentage of the Chilean population considers quality before price, and the number in this class is steadily growing. Such success as has been acquired by United States manufacturers, and their agents and representatives, has been due to careful consideration of the market conditions, catering to the existing trade, and doing considerable advertising of new products.

Germany's "come back" has been the result of exceptional organization at home, extensive sales propaganda, cheap labor and materials, and a trained sales force, aided at home by schools of exporting, and abroad by a large resident population trained in the niceities of Latin courtesy and consideration France, Italy and Belgium have also been active in the market.

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Under the law
is your product

Drug or Toilet Preparation?

OF INTEREST in connection with the recent investigation of the administration of the food and drug law and the recent decision of a United States Circuit Court of Appeals in the Raladam case involving what the Federal Trade Commission said was unfair advertising of Marmola anti-fat tablets, is the status of cosmetic preparations, as they are generally known.

This class of preparations has a divided status and some of its members may be said to have a dual status, with reference to the federal laws having to do with purity and adulteration, misbranding and advertising. These laws are, chiefly, two: first, the food and drug law, and second, the law creating the Federal Trade Commission and prohibiting unfair methods of competition.

Under the first named law drugs are defined as "all medicines and preparations recognized in the United States Pharmacopoeia or National Formulary for internal or external use, and any substance or mixture of substances intended to be used for the cure, mitigation, or prevention of disease of either man or other animals." Included in that definition, according to the ruling of the Food and Drug Administration, is any cosmetic preparation for which claims of therapeutic value or of usefulness in the treatment of any disease are made on the label or container or on a circular packed with the preparation.

Under this law it is admitted by the Department of Agriculture that it has no jurisdiction as to claims made in advertisements of a cosmetic or any other preparation, which advertisements are circulated in newspapers, magazines or periodicals, or by mail or radio.

A cosmetic preparation as to which no therapeutic claims are made admittedly does not come within the scope of the food and drug law; nor does advertising of that preparation. However, it has been held by the Federal Trade Commission to come within the scope of its authority in administering the law against unfair competition. In the Raladam-Marmola case a court has taken issue with the Commission. It remains to be seen how the Supreme Court of the United States will settle their differences.

A preparation having cosmetic characteristics may be classed either as a drug, or as merely a cosmetic. If it is classed as a drug, on account of therapeutic claims made for it, even then general advertising of it has been held to be within the jurisdiction of the Federal Trade Commission, by ruling of that body and by agreement with the Food and Drug Administration. But this ruling and this agreement will go by the board if the federal circuit court's decision in the Marmola case should happen to be sustained by the Supreme Court.

The Post Office Steps In

A third law may enter into the situation as regards the status of certain alleged cosmetic preparations, namely, the law against fraudulent use of the mails. Under this law the Postmaster General may issue a fraud order against a concern using the mails in peddling a fraudulent cosmetic or one for which fraudulent claims are made. Such an order would deny the use of the mails to the concern in question. However, it has sometimes happened that a concern against which a fraud order has been issued will change its name and/or address and continue to do business in pretty much the same old way, if not at the same old stand, unless and until it is checked up on by the Post-office Department, which may issue another fraud order against the new name and address.

This process, however, is long, cumbersome and involved, and for that reason in recent years the government has come to rely more upon the Federal Trade Commission and the unfair competition law as a means of dealing with alleged false and fraudulent advertisers and their products, whether in the cosmetic or other lines, rather than upon the food and drug law and the fraud order law.

Now it may happen that a cosmetic preparation making therapeutic claims may comply with the provisions of the food and drug law against adulteration and against misbranding and with the Department of Agriculture's requirements regarding labeling, and still fall afoul of Uncle Sam, by reason of alleged fraudulent use of the mails in connection with its business.

Again, it may happen that the food and drug law may be complied with and that the mails may not be used to defraud the public, and still a preparation of cosmetic character may be advertised in such a way as to arouse the Federal Trade Commission to action against it in the form of a complaint under the unfair competition law. This has indeed been the case with a number of such preparations, according to officials of the Commission.

Fraudulent Advertising High

They have estimated that as high as 75 per cent. of the alleged false or fraudulent or otherwise unfair advertising that has come to the attention of the Commission concerns alleged cosmetics, perfumes, toilet preparations, anti-fats, drugs and other preparations either for purposes of beautification, remedying physical deformities and disease.

In connection with the cosmetic trade, advantage has been taken, by one section, as represented by the National Beauty and Barber Supply Dealers Association, of the Federal Trade Commission's interpretation and administration of the laws it deals with, by entering into an agreement outlining what are regarded in trade circles as fair and unfair trade practices, which agreement has received the stamp of approval of the Commission.

It is believed to be of interest to note that officials of the Commission hold that they have jurisdiction over alleged unfair advertising of cosmetics and other products, by radio as well as in newspapers and otherwise, outside the label, the container and accompanying circular (in the case of cosmetics classed as drugs).

By reason of the above outlined division of preparations of cosmetic characteristics into drugs and non-drugs, and by reason of the dual if not triple system of government control that is exercised by various branches of the government over certain classes of these preparations as compared with the control exercised by a single department in certain cases, the suggestion has been heard that the existing situation may possibly lend itself to the setting up of what amounts to a peculiar form of "unfair competition".

Let us consider this point. Under this situation a preparation of cosmetic character but for which therapeutic claims are made must make its labels comply with the food and drug law and the regulations of the Department of Agriculture. But, on the other hand, it, inferentially at least, has the approval of the Department, and would appear to be free to advertise as its manufacturers please, unless the Supreme Court overrules the circuit court's opinion in the Raladam case, although temporarily the Federal Trade Commission plans to stand by its guns and

Edgar A. McCulloch (left), one of the commissioners of the Federal Trade Commission, represents one branch of the main government branches controlling drugs and cosmetics, while Walter G. Campbell (right), director of the Food and Drug Administration, represents the other main branch

continue to attack alleged unfair, false and fraudulent advertising.

On the other hand, there may be a preparation of practically the same character as the above, but for which no therapeutic claims are made. Such a preparation can disregard the food and drug law, but it comes within the jurisdiction of the Federal Trade Commission, in the matter of advertising and other methods of doing business, unless the Supreme Court says otherwise.

In both cases it is presumed that attempt to defraud the public or otherwise use the mails to defraud in connection with sale of the product would subject the manufacturer or distributor to the fraud order power of the Postmaster General.

On the face of things it would appear that a preparation of cosmetic character but for which no therapeutic claims are made has the edge over its alleged therapeutic competitor, unless the inferential government stamp of approval that goes with inspection of the therapeutic product under the food and drug law offsets the apparent advantage on the other side.

However that may be, there is no question that many preparations of purely cosmetic character are competing for the market against others laying claim to therapeutic properties. From time to time during the 25 years that the food and drug law has been in effect preparations in the latter class have engaged the attention of the authorities of the Department of Agriculture. One of the early cases arising under the law concerned Mme. Yale's Skin Food, which was labeled as "soothing in effect on the skin, healing as magic balm and fattening in its qualities." This was held to be misbranded when analysis showed its contents to be 76 per cent. vaselin. It was believed by the department to be neither a skin food, nor fattening. This case is merely cited as an example of a number of instances of cosmetic preparations for which therapeutic claims were made and which came under the ban of the Agricultural Department.

If a therapeutic claim is made for a cosmetic preparation it must make good on that claim, department officials say. If it can't make good, then that claim must be dropped from its label, under penalty of seizure or prosecution. And when the claim is dropped the product in question passes out automatically from under the scope of the food and drug law. If no therapeutic claim is made the food and drug officials of the Department pay no attention to the product.

Let us see how the Food and Drug Administration deals with cosmetics for which therapeutic claims are made. A product may attract the attention of food and drug inspectors or agents, or advertisements of the product may be brought to the attention of the department. Samples are obtained and sent to the Department. If medical claims are made for it the product goes to the medical officials of the Office of Drug Control. If antiseptic claims happen to be made for the product it goes to the bacteriologist in that office. In either event, probably, it will go to the chemists of the office for analysis.

Claims made for the product, on its label, container or accompanying circular are checked against the showing made in the study of the product by the department experts. If the claims are not warranted, in the opinion of the latter, the chances are that the manufacturer, will be given opportunity to change his label or his formula, unless it is believed to be a flagrant or dangerous case. In the latter event seizure or prosecution may be ordered forthwith. If the required label or formula correction is made and therapeutic claims are dropped in that connection, the Department directs its attention to other matters. If the therapeutic claims continue but in changed form, or if they are considered as warranted in their original form, the Department will probably check up on the product and its labeling from time to time, to see that there is a continuance of compliance with the law.

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Medicinal Plants of France

By a Special Correspondent

Photos by Drug Markets

Five o'clock lunch before the drying sheds

SECTIONS like Grasse, in southern France, have, of course, been known throughout the world for years because of their aromatic, perfume-flower plants. The strictly aromatic-medicinal plant, however, has been cultivated in France for only a comparatively short time. True, many of the plants used by the pharmaceutical trade have always grown wild in certain sections of France, but the actual cultivation of them on a commercial basis is a relatively recent development. This cultivation was gone into seriously by the French in 1918, when an organization was set up officially to coordinate the efforts of those raising, drying and selling medicinal plants of various kinds. Considerable progress has been made during the past twelve years, and France now can boast of a number of important medicinal plant growing centers, from which exports are directed to every country in the world. In fact, certain of the plants grown in France have earned for themselves an enviable reputation, an example of this being the Milly peppermint, grown in the region known as Milly-en-Gatinais, located in the Seine et Oise department. Apparently, the peppermint grown there, due to conditions of soil and climate, has properties that are very much sought after among the pharmaceutical houses of Europe and other countries. Other medicinal plants in great demand among the better pharmaceutical firms are the Milly belladonna, stramonium, (kind of datura), and henbane, which are said to embody certain qualities not found in plants of these categories grown in other sections.

The foregoing is exceedingly interesting, for the reason that much opposition was brought into play when the question of raising medicinal plants on a rather extensive scale came up for solution. A number of competent authorities in France were frank to say that they were wholly against the cultivation of medicinal plants, for the reason that the very properties desired in plants of this kind are lost, or at least weakened, when the cultivation of them is undertaken. Other authorities, equally as competent, differed, and the final result was that encouragement was offered to those in France desirous of going into the aromatic-medicinal plant business.

In this connection, it is interesting to note that long-experienced growers like Mr. and Mrs. Thévenin-Mazars, of Milly, express the opinion that they have found some of the formerly wild cultures to lose a certain amount of their strength when cultivated. This, according to Mrs. Thévenin-Mazars, as explained to the writer, is usually due to the fact that not enough care is taken to duplicate the soil in which, and conditions under which, a plant grows wild. Every effort is made on the twenty-two hectares of the Thévenin-Mazars to give a plant the corecet setting, and it is, no doubt, due to this consideration that the

Loading Milly Peppermint for delivery to sorting, pressing and packing departments

cultures from Milly are experiencing such a demand. Mr. and Mrs. Thévenin-Mazars have been in the business of raising aromatic and medicinal plants for the past twenty years, and the actual business of the family goes back to the grandparents of Mr. Thévenin-Mazars, they having started with the gathering of plants growing wild in the region. They are, therefore, in an excellent position to express an opinion on the subject of whether or not the cultivated aromatic-medicinal plant embodies therapeutic qualities inferior to those found in plants that grow wild.

To obtain the best results, insofar as quality is concerned, all of the plants grown by the Thévenin-Mazars are alternated. Artichokes, cabbages, etc., are brought into play, and the soil is given a complete rest from the various types of medicinal plants grown. Furthermore, it is felt that horse manure produces much better results, from every point of view, than any other type of fertilizer. This manure is hauled from the army barns, located at Fontainebleau, about twenty kilometers from Milly. Apparently, this natural fertilizer is very much sought after among the farmers of the Milly region, and bids for it have to be placed months and months ahead. Chemical fertilizers of all kinds, depending upon the particular requirements involved, are, of course, also used.

The matter of suitable fertilizers, as applied to the raising of aromatic-medicinal plants, is a highly important one, and considerable study in this direction has been instituted by those concerned. Individual

Peppermint garlands drying in shed at Milly

experiments, among the growers themselves, have made it possible to produce results in one field, which can not be duplicated on a neighboring one, unless the secret of the fertilizer used is known. The very quality of the plant, from a therapeutic point of view, may be altered through the employment of certain kinds of fertilizer.

Some one hundred and twenty medicinal plants indigenous to France are inscribed in the *Codex*, or French pharmacopoeia, although opinion differs greatly as to the therapeutic value of many of those listed, when cultivated. All seem to agree that the entire list, when gathered in the wild state, is of distinct utility. The list found in the French pharmacopoeia comprises all of the aromatic-medicinal plants used, or sold, by the herborist, manufacturer of pharmaceuticals, pharmacist, etc. In addition to this official list are a number of plants which have, for one reason or another, fallen from favor with the public, but for which there still exists a restricted market.

Essential oils, in the following categories, according to certain authorities, have special physiological properties and can be advantageously used by the pharmaceutical trade: bitter almond, anise, cajuput spikenard, bergamot, bois de rose, cinnamon, cedar, lemon, copaiba, cypress, eucalyptus, fennel, juniper, clove, hyssop, peppermint, mustard, myrtle, neroli, petit-grain, pinus, (sylvestris), mint (Pouliot), rosemary, rose, rue, savin, sandalwood, wild thyme, turpentine, thyme, wintergreen.

Among the natural derivatives and synthetic aromatics of value to the pharmaceutical trade, according to Messrs. Jeancard and Satie, are: anethol, lynalyl acetate, benzoic aldehyde, cinnamic aldehyde, borneol, citral, citronnellal, eucalyptol, eugenol, geraniol, linalol, methylnonylcetone, saffrol, methyl salicylate, amyl salicylate, benzyl salicylate, terpineol, thymol.

The foregoing natural derivatives and synthetic aromatics are given, for the reason that the argument in France has been, among certain pessimists, that the natural medicines are being jeopardized by the synthetics. This is, of course, not true, the same thing occurring here that occurred when artificial, or synthetic, perfumes were introduced. Firms like Thévenin-Mazars, of Milly, are doing a better business on medicinal plants than they ever did. In fact, an interview with Mr. and Mrs. Thévenin-Mazars brought out the highly significant statement that practically the entire output is sold each year, before the planting. The only exception to this rule, during the past few years, has been a small carry-over stock of peppermint, due to over-production. This situation is, however, being remedied, and everything possible will be done to keep from producing more peppermint than the trade can absorb. Some of the planting is being done on order from certain pharmaceutical houses, this system, naturally, cutting down any waste effort with crops that might not find a ready market.

To give an illustration of why France stands in the forefront of countries producing aromatic-medicinal plants, the following regions, with their specialties, growing wild, are cited:

Aconite (root), Alpes; *anemone sylvie*, Aisne; *mugwort*, Aisne, Loire; *arnica*, Alpes, Pyrenées, mountains of the Ardeche, *Loire; burdock*, central and northern France; *belladonna*, *avens*, (*herb bennet*), *stork's bill*, *mullein*, woods of the Aisne district; *borage*, fields of the Aisne region (more than 5,000 kilograms gathered, with center of activities at Leuilly-sous-Coucy); *bryony*, fields of the Aisne section; *bugle*, Aisne woods; *bugloss*, Aisne fields; *calamint*, *centaury*, Aisne woods; *digitalis*, Aisne woods, Massif or Plateau Central, Loire; *bitter-sweet*, *euphraise*, Aisne; *fennel* (wild), hills of the Alpes-Maritimes department,

Field of Angelica grown at Milly-en-Gatinais

Bouches-du-Rhone, Gar, Var, Vaucluse, etc.; regions; *fumitory*, *fern*, *cheese-rennet*, (yellow and white), *broom*, Aisne district; *gentian* (yellow), (root) mountainous sections of the Alpes, Ardeche, Bourgogne, Cantal, Doubs, Forez (Loire, Haute-Loire), Puy-de-Dome, Lozere (arrondissement of Marvejols: Malzieu-Ville, Saint-Chely-d'Apcher, Aumont; arrondissement of Mendé: Saint-Amans, Langogne), Mont-Dore, Pyrenées, Vosges; *hyssop*, Alpes-Maritimes, Bouches-du-Rhone; *knapweed*, prairies of the Aisne district; *lavender*, Alpes-Maritimes, Bouches-du-Rhone, Basses-Alpes, Hautes-Alpes, Ardeche, Drome, Isere, Languedoc, Lozere, Vaucluse; *ground-ivy*, Aisne woods; *sweet marjoram*, Alpes-Maritimes, Vaucluse; *mallow*, *melilot*, Aisne fields; *balm-mint*, Alpes, Pyrenées; *mercurialis*, *St. John's-wort*, *nightshade*, Aisne, and mountain districts of the Ardeche; *origanum*, Aisne woods, Loire, Vaucluse; *wild-pansy*, Aisne, mountain districts of the Ardeche; *periwinkle*, *snow-drop*, Aisne woods; *plantain*, *horsetail*, *primrose*, *meadow-sweet*, *pulmonaria* (*wood*), Aisne section; *rosemary*, Alpes-Maritimes, Bouches-du-Rhone, Lozere, Pyrenées-Orientales; *silvan sage*, *hart's-tongue*, Aisne; *thyme*, Alpes-Maritimes, Provence; *tilleul*, (linden), Drome (valley of Saint-Jalle, at Vercoiran, at Saint-Auban: about 4,500 kilograms of dried flowers); *valerian*, *veronica*, Aisne.

From the foregoing it will be noted that France favors a goodly number of aromatic-medicinal plants, making it possible for them to be very successfully grown in many parts of the country. Encouragement for the development of aromatic-medicinal plantations is offered for the reason that it is very difficult to gather sufficient plants from among those growing wild. Furthermore, the gathering of wild plants is frequently beset with obstacles that are difficult to overcome. Often the plants are almost inaccessible, and the effort required to find them far outweighs the benefits in profit. Then again, the more accessible plants may be so deeply rooted that it is practically impossible to remove them.

One of the advantages gained from the cultivation of aromatic-medicinal plants is that of having before one the plants actually known for their therapeutic value. When gathering the wild plants, it is often found that the gatherers have brought in certain types of vegetation that embody no therapeutic properties whatsoever. The time spent in such gathering is, therefore, a complete loss. For example, someone not entirely acquainted with the characteristics of certain plants may pick the *Juniperus Phoenicea*, or false savin, the therapeutic action of which is nil, thinking that he had gathered the real savin. Careless gatherers are also liable to mix plants like the belladonna, aconite, etc., with others, in this way transferring somewhat the highly toxic qualities of the former.

Plants like the rue, for instance, require special handling, certain persons not being able to touch them without suffering certain effects, which, even though they are not harmful, cause the gatherer some inconvenience. Some persons are wholly immune to the more highly toxic plants, and they can gather them without incurring any bad effects. Gathering of the belladonna often makes the persons doing the picking go through the same experience as one who uses belladonna for the purpose of dilating the pupil of the eye. The datura stramonium, which is highly poisonous in quality, presents difficulties for the gatherers also, unless they are immune. What is perfectly harmless for one may prove just the opposite for another.

As already explained, very little encouragement was offered by the official agricultural departments of France for the cultivation of aromatic-medicinal plants until comparatively recently. At the present time, however, the French Ministry of Agriculture is doing a great deal to place this industry upon a more stable and profitable basis, taking to heart the success attained by some of the Central European powers before the war. Experimental stations have been established throughout France, and everything possible is being done to teach children in the schools the rudiments, at least, of aromatic-medicinal plant culture. This movement, which has received its impetus during the past twelve years, has become a very important one, and France has seriously gone into the growing of aromatic-medicinal plants for the world market, as well as her own.

In 1918 the so-called Comité des Plantes Medicinales, or Medicinal Plants Committee, became a fact through a decree passed on the third of April that year, and which was declared official on the fifth of April. This committee operates under the direction of the Ministry of Commerce, and has sub-committees spread throughout the various regional districts of France.

The official report issued by this committee in 1918 pointed out that France had for many years been very dependent upon some of the Central European powers for stocks of aromatic-medicinal plants, and the *raison-d'etre* of this committee was, therefore, the building up of a business native to France. In order to do this, the committee was empowered to set into motion all of the machinery necessary to a complete, thorough study of the culture, yield, trade possibilities, etc., as applied to aromatic-medicinal plants. The committee was further given the power to stop imports when deemed necessary, to take inventory of all the stocks existing in France, and to aid in the establishment of new plantations, or to augment those already in existence.

Since that committee was organized much has been accomplished, as will be pointed out in early issues of Drug Markets. Some of the educational tours instituted by the government authorities, the subsidies provided, etc., brought out the very results aimed at. These results, after a period of twelve years, are, to

say the least, highly interesting. They illustrate what can be accomplished when a definite, intelligently organized program is followed.

A relatively complete list of the aromatic-medicinal plants growing wild in France has already been given in this article, and in connection with the establishment of the Medicinal Plants Committee twelve years ago it is interesting to note the cultures now being successfully grown in the following departments of France:

Aisne: in addition to the 20,000 kilograms of wild plants gathered in the Aisne woods, 25,000 kilograms of wild plants gathered from the fields and prairies, this department now has under cultivation in the neighborhood of 25 hectares, producing 35,000 to 40,000 kilograms. A large number of the plants coming under the aromatic-medicinal category are grown in this region.

Alpes-Maritimes: mint; balm-mint (melisse citronnelle), rose, orange flower, twigs and leaves.

Ardeche: fennel.

Basses-Alps: lavender.

Charente-Inferieure: mustard seed.

Deux-Sevres: angelica.

Drome: lavender.

Gard: at Meynes, hyssop, balm-mint, vervain, clary sage, fennel.

Indre-et-Loire: licorice.

Loire: roses de Provins; *seeds:* fennel, caraway, anise, coriander, flax, fenugreek, angelica, mustard; *roots:* angelica, doggrass, bitter-sweet, valerian, licorice, elecampane, orris, burdock, soapwort, polypody; *flowers:* hollyhock, marigold, linden, arnica, chamomile, mullein, feverfew, violet, rose; *leaves:* aconite, balm-mint, pansy, mugwort, digitalis, belladonna, absinthe, mint.

Maine-et-Loire: chamomile, mint, hyssop, balm-mint, cassia, rose de Provins, parsley.

Nord: marsh-mallow, mallow, mullein, chemomile, chicory.

Puy-de-Dome: angelica.

Seine: cochlearia, horse-radish, henbane, nightshade, stramonium, balladonna, aconite, mint, balm-mint, angelica, rhubarb, buckthorn.

Seine-et-Oise: practically all aromatic-medicinal plants are grown in this department, of which the Milly district, as already pointed out, is the most important.

Vaucluse: psyllium, lavender, mint, melilot.

The foregoing compilation is, of course, incomplete, as a number of the departments not appearing therein also grow aromatic-medicinal plants of various types. For the purpose of showing how wide-spread the actual cultivation of aromatic-medicinal plants is at the present time the foregoing list of departments and cultures should prove enlightening, at least. In other words, the work undertaken a little more than ten years ago has borne fruit that was beyond the fondest hopes of those concerned.

Just how the aromatic-medicinal plant business is being successfully and profitably carried on in France is a study that merits the attention of all concerned, and a series of articles prepared especially for the readers of Drug Markets, together with supporting illustrations, will appear within the near future.

Drug or Toilet Preparations?

(Continued from page 243)

For the purposes of the food and drug authorities of the Department of Agriculture a preparation of cosmetic character is either a "drug", or it is not a drug; or in other words, in the latter event it is merely a cosmetic which their law does not recognize and with which they are not concerned.

Cold creams, lotions and the like, if labeled as merely cleansing, or astringent, for example, are not drugs, but cosmetics, in the opinion of drug officials. If, on the other hand, they are labeled for the treatment of pimples, blackheads, chapped skin, etc., they are classed as drugs.

Mouth washes, dentifrices, tooth powders or tooth pastes, if claimed only to clean the mouth and teeth are held to be cosmetics. If recommended for the treatment of diseased conditions or for antiseptic purposes they become subject to the food and drug law.

Hair tonics are regarded as cosmetics if recommended for cleaning the scalp or beautifying the hair, but if they are said to be good for scalp disease, dandruff or baldness they become drugs.

Depilatories are cosmetics merely, because they are supposed to remove hair.

Hair dyes are cosmetics because gray hair is regarded as natural and they do not cure it.

Manicuring preparations for softening cuticle or for coloring or polishing the nails are cosmetics and nothing else, it is held.

A preparation for cleansing or beautifying the eyes is nothing but a cosmetic, but if an eye water preparation contains ingredients for treatment of irritation or inflammation it passes over into the class of drugs.

A toilet powder for chafings or irritations is held to be a drug, a plain dusting powder or a face powder a cosmetic.

Lip sticks and rouge are cosmetics, except that such a thing as a colorless lipstick making claims with reference to chapped lips comes within the drug classification.

Perfumes and toilet waters, whether pure or compounded, are in the class with cosmetics.

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COLLAPSIBLE TUBES OF
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New Therapeutic Preparations

By Dr. R. L. Mayer*

ONLY those preparations which have shown some signs of progress will be reported. Inasmuch as the entire field, which would have to be covered, is too large, the author selected a number of special fields and these are treated in somewhat more detail than would be possible if the entire field had to be covered. For, it is certainly interesting to the pharmaceutical chemist to know how the fact that a certain drug is useful for a certain purpose is determined, how the drugs are tested, improved and how they actually work in practice. The author describes below a number of preparations of organo-therapy, the diagnosis and therapy of certain diseases, certain alkaloids, as well as sedatives, narcotics and soporifices.

Organo-Therapeutic Media

The industrial preparation of organo-therapeutics has increased markedly during the past few years, following investigations to differentiate hormones contained in various organs of the body and to prepare these hormones in a state of highest purity. The advance in this branch of the pharmaceutical industry owes its existence to the discovery of suitable methods of testing and analysis. The fundamental basis of every research into a hormone is the availability of a specific reagent for that hormone. Such an agent must be used not only for the identification of the hormone, but also for quantitative determination. The peculiar nature of the substances handled and particularly the fact that they occur in extremely small proportions in tests make it essential that only biological methods be used.

After a test had been found for detection of the female sexual hormone according to investigations carried out by the American chemists Long, Evans and Allen, it was possible to place the substitution therapy of sexual deficiency on a more certain foundation. Up to this time it had been customary to use either the dried organs themselves or arbitrarily prepared extracts of quite inexact composition and, for the most part, of slight activity. It was determined that two different substances must be taken into consideration as specific hormones for the female sexual function. One of these hormones is produced in the ovary and the placenta, the other in anterior portions of the "brain appendix."

*Fortschrittsberichte, pages 1-6

The first mentioned hormone is produced in a normal manner in the follicular apparatus of the ovary, that is in the portion, in which the egg is formed and also in the placenta during pregnancy in quantities that are far in excess of the needs of the organism. The eggs are pushed into the blood from the placenta and then removed in the urine. This is the hormone which Zondek called folliculin, Steinach progynon, Loewe telekinin and Parkes oestrin. As will be seen, Butenandt prepared the hormone in the crystallines state and gave it the name progynon (Chemiker Zeitung, 1929, pages 938ff). This hormone has the power of making passionate, immature or badly developed or undeveloped female animals, and also to make passionate, female animals deprived of the ability of developing sexual passion by castration. It particularly enhances the growth of the uterus mucous for the purpose of absorption and nestling of the fertilized egg. It is possible to watch under a microscope this cyclic process in normal animals.

Various properties of the hormone aid in the industrial preparation of this medicament. It is not medicinally specific, which means that the hormone of man works on animals and vice versa. Active hormones have been found in the blood of female animals. The two principal raw materials used in preparation of the hormone, are easy to obtain: that is animal placenta and urine of pregnant women. Great quantities of the hormones are present in the urine in the last months of pregnancy, as much as 10,000 to 20,000 ME per liter. Urine is particularly well-adapted as a raw material for preparing the hormone, for the reason that it is free from albumen. This means that the method of preparing the hormone is very considerably simplified.

The preparation of the pure hormone has been reported from three different sources, namely by Doisy at the thirteenth International Congress of Physiologists in Boston, by Butenandt of Goettingen and by Wieland, Straub and Dorfmueller of Munich. It has been thought for a long time that the hormone is a lipoid. However, in the preparation of the pure hormone it has been shown that it is dialyziable and soluble in water. Butenandt succeeded in preparing the pure hormone from an oil isolated from the urine

of pregnant animals. The process consists in brief of the elimination of accompanying substances by shaking the alcoholic-aqueous solution of the hormone with petroleum ether, recovery of an alkali-soluble fraction, whose solution properties indicate the presence of lactone groups and fractionation under a high vacuum. Crystals are obtained in this manner which are easily soluble in alcohol, ether, acetone, chloroform, benzol, hot acetic ester; in cold ether, petroleum ether and water soluble with difficulty. The melting point is 240° C. with decomposition. The probable rough formula of the hormone is $C_{23}H_{28}O_3$ or $C_{24}H_{32}O_3$.

Two of the three oxygen atoms are combined in the form of a lactone group; third is possibly present in the form of an hydroxyl group. Formula and behaviour remind one of the digitaligenin prepared by Windaus and bufotalin prepared by Wieland. Hence the hormone, progynon, belongs most probably to the sterin group, which contains a large number of physiologically and pharmacologically active substances. The physiological activity of the pure hormone is very considerable, corresponding to approximately 500 to 800 liters of a urine very rich in the hormone.

The second sexual hormone, which is produced like follikulin during the period of pregnancy in women and just like the follikulin is removed in the urine, is the hypophysenic hormone HVH. It has the same action as progynon on infantile animals with undeveloped sexual organs. This hormone is not however active in the case of castrated animals. Its activity is connected with the presence of ovi. Another difference of the HVH hormone is that it acts both in men and women while progynon acts only in women. It is also prepared from urine. This hormone occurs in the urine of pregnant women and animals in such amounts on the fifth day after pregnancy that it can be used, according to Zondek, as a means of diagnosing pregnancy. This hormone has also been called prolan but it has not yet appeared on the market under this name. Up to the present time it has been prepared from the pituiary body by a method which allowed the chemical separation of the hormone from the total pituiary extract, such as orasthin, or by a method in which the pituiary body is cut up into its different sections. These preparations are standardized by the blood pressure measurement method, according to the so-called Voegtlin units.

Thus the preparation Orasthin is manufactured by the I. G. Farbenindustrie A. G. It comes on the market in the form of ampulles of one c. c. of strength of three and ten units. It is obtained by chemical fractionation of the entire pituiary body extract. Other preparations, which have been known for some time, include Tenuigen made by Pharmagans, Hypolantin made by Dr. Laboschin, Hypolobon made by Dr. Freund and Redlich and Praephyston made by the Promonta A. G. These preparations are either the dried glands or extracts from the glands.

The field in which these preparations can find use has not yet been clearly delineated. They were first recommended for use as echolics and uterine tonics.

When it was learned how to separate the hypophysin in this manner into its component parts, which represented the total extract of the pituiary body, it was also found possible to obtain the hormone of the posterior lobe in comparatively pure state. This hormone differs quite essentially from that of the anterior lobe. The uterus-exciting action is absent entirely from this hormone, and on the other hand it has a pronounced effect on the movement of the bowels and furthermore what is particularly important, it also has the effect of reducing the excretion of urine by about one third. It is a specific remedy for the treatment of diabetes insipidus, of which a certain disturbance in the functioning of the posterior lobe of the pituiary body is the cause, and it can also be used with good results in the condition of paralysis of the intestines.

Tonephin is made by the I. G. Farbenindustrie A. G., and just like orasthin, it can be chemically separated from the entire extract of the glands. It can be standardized according to the Voegtlin units. It comes in the form of ampules which contain one c. c. of the preparation of five units strength.

Other preparations found on the market are obtained from the prepared section of the posterior lobe just as in the case of the hormone from the anterior lobe. However, these medicaments obtained from the posterior lobe of the pituiary body have been very irregular in strength up to the present time and also not pure, for in all the uterine-exciting components are still pronouncedly present (they are also recommended as uterine tonics), but they also have an action on the intestines.

In contradistinction to the results, which research has produced in the female sexual hormone even in earliest times, knowledge of the male sexual hormone or hormones is still very slight. The trouble is that there is still lacking a standard testing method, simple, rapid and certain, of the type that exists for testing the female hormone. The author believes that of all the testing methods that have been proposed for this purpose the most useful is the one developed by Loewe and Voss some years ago. This test is applied to castrated male mice. The hormone is used to regenerate the glands and after injection within a period of five days both microscopic and macroscopic evidence is available of the regeneration.

The male sexual hormone, which is called Androkinin by Loewe, is soluble in water, and just like the female sexual hormone, it is not medically specific. The extracts obtained from animals are active in men and in certain cases vice versa. This hormone is also found in the blood of men. The yield obtained from organs is still small, and the extracts, that are found on the market at the present time, are less active than

(Continued on page 267)

SCIENTIFIC ADVANCES

A Review of Patents

UNITED STATES PATENTS

Root Canal Filler

This dental cement consists of oil of cloves and the sodium salt of tetraiodo-phenolphthalein. J. W. Smith, Madison, Wis. U. S. Patent No. 1,754,577, filed Aug. 17, 1928.

Receptacle Closure

The cylindrical outlet portion of the container has an axial outlet opening. An arcuately curved end surface surrounds this opening. The closing device consists of a plate arcuately curved concentrically with the end surface of the outlet portion and has opposite resilient arms pivotally mounted on the outlet portion so that the plate can swing over the surface to open and close the outlet. One of the arms has a portion transversely curved to yield and frictionally engage the outlet portion and hold the closure device in closed position. W. J. Donnelly and E. Zimmer, Newark, N. J. U. S. Patent No. 1,770,464, filed Jan. 2, 1929.

Anti-rachitic Substances

This process is concerned with the actuation of the synthesis of vitamins. It consists in irradiating materials including these vitamins in the presence of a halogen. A. J. Pacini, assignor, C. M. Richter, Chicago, Ill. U. S. Patent No. 1,771,343, filed Dec. 10, 1927.

Mercury Derivative of Di-iodo Resorcin Sulphon-Phthalein

This is a new pharmaceutical product. This is a hydroxy-mercuri derivative of di-iodo rescorcin sulphon-phthalein. It is free of extraneous alkali metal salt, and complex organic mercurial containing an acid radical bound to mercury. F. Dunning, assignor, Hynson, Westcott & Dunning Inc., Baltimore, Md. U. S. Patent No. 1,757,176, filed Dec. 8, 1928.

Amino-alkyl-amino Derivatives of Aromatic Aminohydroxy or Polyamino Compounds

These new aromatic products have the general formula:— $R(N)R_1.R_2.(N)(X_1)(X_2)$. In this formula R designates an aromatic radical of the group including the benzene and naphthalene series substituted by at least one amino, alkylamino, hydroxy or alkoxy group. R_1 stands for hydrogen, alkyl, alkyl-amino, alkyl-aminoalkyl or dialkylaminoalkyl group. R_2 stands for an alkylene group, the carbon atom chain of which may be interrupted by oxygen, sulfur or nitrogen, or for the residue of an isocyclic or heterocyclic compound. X_1 and X_2 stand for alkyl groups, one of which may be substituted by hydrogen, or for the carbon chain of a heterocyclic compound in which case the outermost N will be a part of the ring. These compounds are generally viscous oils of high boiling point and possess valuable pharmaceutical properties, especially a high efficiency against blood parasites. W. Schulemann, Vohwinkel, and W. Kropp, Elberfeld, Germany, assignors, Winthrop Chemical Co., Inc., New York. U. S. Patent No. 1,757,394, filed June 30, 1927.

Dehydration Product of Sorbitol

The new product is the dehydration product of sorbitol which is poorer in water than sorbitol by two molecules per molecule of sorbitol. The new product has a boiling point of about 157° C. under three millimeters pressure. J. Mueller, Eppstein and U. Hoffmann, Ludwigshafen-on-Rhine, Germany, assignors, I. G. Farbenindustrie A. G., Frankfurt-on-Rhine, Germany. U. S. Patent No. 1,757,468, filed Jan. 7, 1928.

Barbituric Acid Compound

The new compound is made by the interaction of phenyl-allylbarbituric acid and alpha-phenyl-2:3-dimethy-1-4-dimethylamine-5-pyrazolin. The product that is obtained possesses valuable hypnotic and analgetic properties. F. Hefti, Altstetten, near Zurich, Switzerland. U. S. Patent No. 1,757,906, filed May 9, 1928

BRITISH PATENTS

Hydrogen Peroxide

In distilling hydrogen peroxide from solutions containing or yielding it, such as, persulfuric acid or persulfate solutions by passage through a heated pipe, a tube of greater length than ten meters and preferably thirty to sixty meters is used. The vapors and the liquid pass in the same direction through the tube and may be drawn by a vacuum. The tube may be formed of or plated with gold or platinum or may be formed of base metals, such as lead, which are resistanct to the acid liquid. Deutsche Gold und Silber-Scheideanstalt vormals Roessler, Frankfurt-on-Main, Germany, and G. Baum, Weissenstein-on-Drau and Oesterreichische Chemische Werke Gesellschaft, Vienna, Austria. B. P. No. 330,255, filed Feb. 20, 1929.

Synthetic Drugs

Normal amyl-cresols are made by treating cresyl-normal-valerates with aluminum chloride and reducing the resulting ketones. The products possess phenol coefficients between 250 and 300, and are valuable antiseptics and disinfectants. In examples (1) 6-normal-amyl-3-methylphenol is obtained by heating meta-cresyl-normal-valerate with aluminum chloride and reducing the product with zinc amalgam. Ortho-cresol-normal-valerate is heated with aluminum chloride and the product is fractionally distilled under a vacuum, the 4- and 6-normal-valero-2-methylphenols are obtained and reduced with zinc amalgam to yield the corresponding 4- and 6-normal-amyl-cresols. 2-Normal-amyl-4-methylphenol is similarly obtained from para-cresyl-normal-valerate which may be made by heating para-cresyl-normal-valerate with aluminum chloride. Boot's Pure Drug Co. Ltd., and J. Marshall Nottingham, England. B. P. No. 330,333, filed March 26, 1929.

Perfumes From Cedar Wood Oil

It is known that a series of terpenes by treatment with oxygen or air or by auto-oxidation are converted into substances, which possess a much greater taste and odor value than the original materials. Thus the weakly-odorous pinene is converted into verbenone, which has an extraordinarily penetrating odor, resembling turpentine. On the other hand the limonene is converted into carvone, the most important ingredient responsible for the taste of kuemmel oil.

Attempts to oxidize cedar wood oil have not been undertaken up to the present time. The action of oxygen or air on cedar wood oil results in the formation of products which consist essentially of an unsaturated alcohol, $C_{15}H_{24}O$ and a ketone

$C_{15}H_{22}O$. There is a possibility that other isomers are also present in the mixture. The unsaturated alcohol is solid and has a melting point of 101° to 102° C. and the ketone is likewise solid and melts at 32.5° C.

Thus one hundred grams of cedrene, which is obtained from American cedar wood oil (density at 15° C. 0.940), to which ten grams of cobalt resinate is added as catalyst, are treated at a temperature of 30° C. for forty-eight hours with oxygen. The mass becomes constantly more viscous during this operation. It is finally distilled with steam, whereby unchanged cedrene first passes over. The distillation then becomes more difficult, and then a semi-fatty, mass, which partially sinks in water, passes over. This mass consists of the auto oxidation products of cedrene. These amount to approximately forty per cent. of the original cedrene, which twenty-five per cent. of the same remain behind as resin in the residue. Vanillin Fabrik G. m. b. H., Hamburg-Billbrook, Germany. G. P. No. 499,455, filed March 5, 1929.

Hormone Derivation

The hormone, which occurs in the anterior lobe of the hypophysis, is obtained from the urine of pregnant warm-blooded animals by precipitating lime from filtered urine by the addition of alkali or ammonium oxalate or other salt of an acid which forms a difficultly soluble calcium salt. After separation of the precipitate, the liquid is treated with an organic liquid such as alcohol to precipitate the hormone. Schering-Kahlbaum A. G., Berlin, Germany. B. P. No. 329,605, filed October 14, 1929.

Laevo Nerolidol

Alpha-beta-dihydropseudo-ionone and acetylene are condensed by means of a condensing agent, such as sodium amide, sodium powder, and the like. The product obtained is methyl-ethinyl-mono-geranyl-carbinol. The latter substance is reduced by means of a reducing agent, such as sodium and water or hydrogen, in the ore presence of a catalyst, such as finely divided nickel, platinum or palladium. Societe Anonyme M. Naef & Cie, Genf-Plainpalais, Switzerland. G. P. No. 488,348, filed March 14, 1924.

Iron Salts of Ricinoleic Acid

This process in concerned with the manufacture of basic iron salts of ricinoleic acid and their halogenated derivatives. Ricinoleic acid or its halogenated derivatives or solutions are treated in excess of alkali with sufficient quantities of iron hydroxide or ferric salts for the formation of basic salts. Thus normal iron ricinoleate, prepared in the usual manner, is dissolved in alcohol and the solution is mixed with so much sodium hydroxide solution, that the solution, which remains above the precipitate of basic iron ricinoleate, is colorless. Chemische Fabrik von Heyden A. G., Radebeul-Dresden, Germany. G. P. No. 488,175, filed October 4, 1925.

Therapeutic Salt Mass

The fused mass of colloidal solutions of metallic compounds or of metalloids or metalloidal compounds, or else both kinds of chemicals, are mixed together with additional heating. The mixture is then admixed with carmelized grape sugar and other carbohydrates. The mixture possesses therapeutic properties. Dr. Max Steinkuehler, Dresden-Weisser Hirsch, Germany. G. P. No. 488,201, filed May 20, 1927.

Ointments and Emulsions

Petroleum jelly, paraffin, lubricating oils, fatty oils and other substances of a fatty or oily nature are combined, preferably during heating, with 0.1 to ten per cent. of one or more phytosterins to form compounds which are capable of absorbing water, aqueous solutions or substances such as glycerin. The absorbed substance is dispersed in the base. The products are applicable to the manufacture of ointments, medical and cosmetic salves, etc. The phytosterins may be oxidized before addition or air may be passed through the liquefied base during the addition in order to oxidize the phytosterins in situ. Examples refer to the addition of three per cent. of a phytosterin to petroleum jelly, paraffin or lubricating oil, the mixture being heated, if desired, to a temperature of 180 to 200 degrees C while stirring and passing air through it. The products are capable of absorbing two to three times their weight of water or water-solutions of substances such as glycerin, aluminum subacetate, silver nitrate or iodine. Petroleum jelly containing five per cent. of a phytosterin is stated to be capable of absorbing four times its weight of water; in the place of water, glycerin, aqueous alcohol or other substance may be absorbed. The preparation of salve bases capable of absorbing water, water solutions or other liquids by the addition to petroleum jelly, paraffin, etc. of oxycholesterin or oleic acid is referred to. H. Sandquist and T. O. H. Lindstroem, Stockholm, Sweden. B. P. No. 329,305, filed February 14, 1929.

Synthetic Drugs

Alpiphatic homologues of polyhydroxybenzenes, in which the alkyl side chain containing at least eight carbon atoms, are converted by known method into their metallic salts or into salt-like compounds with bases. When using bases, the products may contain other proportions than equimolecular proportions of the two components. The reaction may be effected by double decomposition of a metallic salt of the phenol with a salt of the base. A solvent, for example alcohol and chloroform, may be present and heat may also be applied The products possess therapeutic porperties. Examples are given of the interaction of octyl resorcinol decyl resorcinol, dodecyl resorcinol, decyl pyrocatechol, and decyl pyrogallol with hexamethylenetetraminel also of decyl resorcinal with piperazine, sarcosine anhydride and betaine; of sodium decylresorcinate and calcium chloride. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 330,519, filed March 6, 1929.

Synthetic Drugs

Substituted ureas and thioureas are prepared by the interaction of phosgene or a polymer of phosgene, thioiphosgene or carbon di sulphide with an aromatic amino compound which is substituted in the amino group, either directly or through an amino-aroyl linkage, by one or more heterocyclic residues containing an unsubstituted amino group, or by one substituted by an aminoaroyl group, for example benzoyl or benzene sulphonyl. In the preparation of these products, which are useful therapeutically, heterocyclic compounds are employed which contain a nitro group and one or more replaceable halogen atoms, for example 4-nitro-5-chloroacridine; 4-chloro-6-nitro-1:3-quinazoline; nitroarylchlorotriazines and nitroarylchloropyrimidines. Thus sodium 1-naphthylamine-4:6:8-trisulphonate is treated with 6-nitro-4-chloroquinazoline, the product reduced with iron and acetic acid, treated with 3-nitro-4-methylbenzoyl chloride, the product again reduced, and finally converted into the urea by means of phosgene. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 330,583, filed Jan. 10, 1929.

Organo Arsenic Compounds

3:3′-Dichloro-4:4′-dihydroxy-5:5′-diacetylamino-arsenobenzene is prepared by acetylating the diamino compound. The starting material is obtained by reducing 3-chloro-4-hydroxy-5-nitrophenyl-arsinic acid. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 330,862, filed Oct. 25, 1929.

Organic Iodo Compounds

Iodo-ortho-oxyquinoline-ana-sulphonic acid is prepared by treating ortho-oxyquinoline-ana-sulphonic acid or its alkali salt with hydrogen peroxide and hydriodic acid. In the place of the acid it is also possible to use a substance which is capable of forming hydriodic acid during the process. Thus for example

(*Continued on page 277*)

The Literature Says:-

Perfume Bath Salts

EITHER soda crystallized in fine crystals or pulverized rock salt or ordinary salt (sodium chloride) is used as the basic substance in the preparation of perfumed bath salts. However, sodium hyposulphite has also been often recommended for this purpose. The use of this chemical cannot, nevertheless, be advised, for the reason that it has the property of decomposing many delicate perfumes that are used to perfume the product. It is also true that soda has an effect upon the perfume in many cases and often causes ugly discolorations. The finest quality of bath salts are prepared with the aid of rock salt.

The following are some of the formulae, given in the original article in "Pharmazeutische Zeitung" by Dr. F. Winter. A lavender-odorous bath salt is obtained from a perfume mixture consisting of 450 parts by weight of French lavender, 350 parts by weight of the finest spike oil, two parts by weight of coumarin, fifty parts by weight of oil of bergamot, thirty parts by weight of linalool and twenty parts by weight of artificial rose oil. A bath salt with a pine needle odor is obtained from a perfume mixture consisting of two hundred parts by weight of oil of silver fir, ten parts by weight of coumarin, twenty parts by weight of lemon oil, thirty parts by weight of lavender oil.

Rose odors are obtained with a mixture consisting of forty parts by weight of artificial rose oil and sixty parts by weight of alcohol. An eau de Cologne effect is secured by the use of a mixture consisting of 150 parts by weight of oil of bergamot, fifty parts by weight of oil of lemon, twenty-five parts by weight of oil of Portugal, forty parts by weight of lavender oil, thirty parts by weight of oil of rosemary, thirty parts by weight of petit-grain oil and fifty parts by weight of artificial neorli oil. A violet effect can be obtained by using a mixture which contains one hundred parts by weight of violet extract, three parts by weight of anisaldehyde, five parts by weight of phenyl-ethyl alcohol, five parts by weight of iris solution, three parts by weight of jasmine essence and four parts by weight of a solution of ketone musk. Anywhere from fifteen to twenty parts by weight of any of these perfume preparations may be used to one thousand parts by weight of rock salt crystals. After the perfume has been properly mixed with the rock salt, a water-soluble color is added. In coloring the pine needle bath salts fluorescein or uranin is mostly used.

Antimony in Pharmaceuticals Synthesis

The medicinal properties of antimony have been known for many hundreds of years. Fundamental disclosures regarding the etiological properties of this metal have been made during the past twenty years. This metal has proven valuable in fighting tropical diseases. First tartar emetic was used for this purpose. This chemical was considered indispensable in the treatment of diseases such as kala-azar, tste-tste sickness and the like. The drug was injected intravenously only because of its toxic properties and its destructive action upon the tissues.

During the past few years great progress has been made in the development of pharmaceuticals, containing antimony and of a less toxic character. Synthetic chemistry has introduced many synthesized drugs of this character. Thus the road lay from tartar emetic to the labile complex salt of trivalent antimony with potassium tartrate through the choice of a suitable complex-forming reagent. Thus technical progress led from such a pharmaceutical as antimosan to the drug fuadin, which is Antimony-III-sodium dipyrocatechin-disulphonate. The antimony is contained in this product in a very firm, complex union. This drug has been found to be highly useful in intravenous injections and it is free from danger and can be used in the place of tartar emetic.

Experiments extending over many years have been carried out in the attempt to vary the therapeutic properties of the antimony pharmaceuticals and success has been attained along these lines by the benzol substitutions of the aromatic stibinic acids. A series of derivatives of para-aminophenyl-stibinic acid have found practical use, particularly in the treatment of kala-azar. The most active and also the most non-poisonous of these preparations is the one known as Neostibosan, which is diethyl-amine-para-aminophenyl-stibinic acid. From eight to ten injections of this drug will cure kala-azar in 98 per cent. of cases treated. Dr. Hans Schmidt, "Chemiker Zeitung," 1930, page 524.

Active Immunization in Diphtheria

The media, which have been used heretofore for the immunization of children against the disease diphtheria, consisted of variously composed mixtures or compounds of di-toxin and di-antitoxin. These preparations, which were designated as T. A., are neutral and sub-neutral or over-neutral preparations in dissolved, liquid form, while the preparations, designated as T. A. F., are used in the form of suspensions of solid precipated T. A. compound in the form of flakes. The solid T. A. preparation is obtained by the neutralization of the most suitable toxin-antitoxin mixture. The antitoxin in the T. A. preparations is appropriately bovine immunizing serum, inasmuch as horse immunizing serum, in spite of the small amount present in the T. A. preparations, is able to make the patient over-sensitive to the later use of healing serums of antitoxic products obtained from the horse.

Furthermore, anatoxin has been used for active immunization. This is a ditoxin, which has been made non-poisonous by the action of formalin at an elevated temperature. The immunizing properties of the serum are however not adversely affected by this treatment. Inasmuch as the so-called di-toxin is the germ-free filtrate of a diphtheria bouillon culture, thus all the unspecific and undesirable secondary reactions, which are caused by the bouillon and by the di-bacilli albumen dissolved in the bouillon (which bacilli are however not-toxic), are found in the anatoxin. Dr. H. Schmidt, "Chemiker Zeitung," 1930, page 524.

Thallium Acetate for Treating Ringworm

Experiments have been carried out with the use of thallium acetate in the treatment of ringworm. It is reported that sixty-five out of seventy-four children were cured after one dose. The following important conclusions were drawn from these experiments. In the first place it was demonstrated that thallium acetate can be safely used as a depilatory agent, where, on account of the age of the patient, the X-ray machine cannot be used. In the second place in order to give the correct dose, the patient must be accurately weighed and then the correct dose must be administered. After-treatment of the patient after the dose has been given and is very important, including keeping the patient in bed, washing the scalp daily with sulphur soap or the like and using a fungicide. It has also been demonstrated that the use of thallium acetate for this purpose should be limited to children under the age of five, owing to its toxic effects on those above that age.—N. McC. Mitchell, "British Medical Journal," 3612,589.

Iodine Content in Tincture

A study has been made of the processes available for the determination of the total iodine content of tincture of iodine. A

method has been worked out in which potassium dichromate is used and excellent results have been obtained. In this method approximately two grams of the tincture of iodine are mixed with a few c. c. of chloroform, approximately 100 grams of water, 5 c. c. of 25% hydrochloric acid and 20 c. c. of potassium dichromate solution of concentration of one-tenth of one per cent. After the mixture has been allowed to stand for about two minutes, 15 c. c. of alcohol are added and the mixture is then kept for fifteen minutes. The iodine liberated by the potassium dichromate is then titrated with the aid of tenth normal sodium thiosulphate.—A. Neumann, "Pharm. Zeitung," 1930, volume 75, pages 532-533.

Tests for Resins of Jalap Popdohyllum and Scammony

Methods for testing these resins are outlined. Thus in the case of resin jalap, one gram of the powdered substance is treated with 30 c. c. of ether, and after fifteen minutes have elapsed, the ether solution is decanted. The residue, that is recovered after this operation, is extracted again with an additional 20 c. c. of ether in successive quantities. Then the extracts are evaporated. The final residue obtained in these operations should not exceed half a gram in weight. The following test with jalap resin is suggested One gram of the powder is boiled with 30 c. c. of carbon tetrachloride for thirty minutes, cooled down, filtered, and washed with 15 c. c. of the solvent. The extracts, when they are evaporated, should yield approximately 3% of the powder used.

In the ammonia-solubility test for podophyllum resin it is necessary to fix quantities and times. Half a gram of the powdered resin is stirred with 30 c. c. of the ammonia solution and, after a period of thirty minutes has elapsed, the solution is filtered through a tared filter. Thirty cubic centimeters of water are employed for transfering the solid and also for washing it on the filter paper. The dried residue should exceed for Peltatum resin 55%. Emodi results gave by this test 40 to 48% of insoluble matter. Five grams of the resin were also used in carrying out the ether test, in which 30 c. c. of ether were employed. Peltatum resin gave 66 to 77% of extract and emodi resin gave 55 to 59%.

The original article also contains notes on the coagulation test to distinguish the above two varieties of resin. In the examination of scammony resins, 85.4% was the lowest figure observed in the ether test using 30 or 40 c. c. of ether with one gram of resin, as indicated in the jalap resin test. Similarly, the boiling carbon tetrachloride test gave 52.8 to 60.9% of extract for four samples.—D. B. Dott, "Pharm. J.," 1930, volume 124, 213-214.

Color Test for Aloes

The reagent employed in carrying out this test is an anhydrous solution of hydrogen peroxide. This anhydrous solution is prepared by extracting a 30% solution of peroxide with quinoline and then drying the extract. The reagent is used in a concentration of 1%, and is standardized by dissolving in dilute sulphuric acid and determining the liberated iodine after potassium iodide has been added.

A few milligrams of aloes in the finely powdered state are used in making the test. The aloes is warmed up with a small amount of the reagent at 60° C. for three to five minutes, a color being produced characteristic for each variety of aloes. Thus in the cases of aloe climensis and aloe vulgaris a purple color is obtained, and this color is converted into a rose pink on the addition of 1% sulphuric acid for acidification. Aloe ferox and aloe spicata give a greenish color which changes to greenish yellow when acid is added. Aloe perryi gives a brown color which remains on acidification with sulphuric acid. It was also found that all of the species of aloes examined gave a dark color when they were treated with a dilute solution of ferrous sulphate followed by addition of hydrogen peroxide. This dark color became a rose pink when acidified.—E. J. Schorn, "Pharm. Journal," 1930, volume 124, pages 212-213.

Molecular Combinations of Veronal

A combination of veronal and pyramidon has been prepared in the past. It appears that there exists a residual affinity between the oxygen atom of the CO group in pyramidon and one of the atoms or the two atoms of hydrogen in the NH group in veronal. The authors investigated the possibility of obtaining compounds of veronal which are mono-substituted in the nitrogen radical. These are methyl-veronal, phenyl-veronal, compounds with antipyrene, with pyramidon and with the anhydride of sarcosin. The melting point curves show that a definite compound is not obtained. The two atoms of hydrogen in veronal are therefore indispensable. The homologues of veronal, in which the ethyl groups are replaced by other alcoholic radicals likewise affording compounds of the same nature. The authors have studied the crystalline compounds of luminal (phenyl-ethyl) with antipyrene, pyramidon, and the anhydride of sarcosin. The study of the melting point curves shows that the medicinal product, which is known by the name veramon, is a mixture of the compound, veronal (one part); pyramidon, one part with an excess of pyramidon.—"Journal de Pharmacie et Chimie," Jan. 1930.

Atropine Preparations

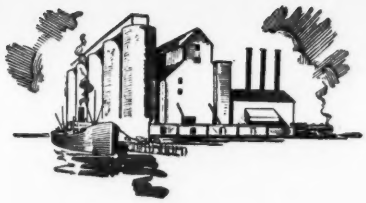
The dry belladonna roots are very finely pulverized. Then they are moistened with a solution of soda and dried again after the addition of a small quantity of anhydrous and solid carbonate of soda. The pulverized product is then extracted with ether for the purpose of removing the grease and fats that it contains and the residue is thereafter dissolved in sulphuric acid or acetic acid of 5% concentration. After filtration, the atropine and the hyoscyamine are precipitated by means of ammonia. These crude alkaloids are then dissolved in dilute acid and the coloring matters and resins are removed by agitation with ether. The liquid is then covered with an ether layer and potassium carbonate is added slowly until precipitation starts. Then an excess of the solid salt is added and the mixture is vigorously shaken. The ether layer is poured off, dehydrated with solid potassium carbonate, and poured quickly through a folded filter paper. The filtrate is evaporated until crystals begin to form, when it is cooled rapidly with agitation. The ether that is evaporated off is collected and used for further extraction of the aqueous solution.

The purified bases which are obtained in this manner are mixed with 50 c. c. of pure chloroform for each kilogram of the bases, and this mixture is then heated at a temperature of 116° C. for half an hour in an oil bath for the purpose of converting the hyoscyamine into atropine. After five hundred grams of acetone are added, the crystals of atropine are collected on a vacuum filter, washed with acetone and dried. In order to prepare the sulphate, one kilogram of the base is dissolved in 1.3 liters of absolute alcohol and the solution is nearly neutralized with an ice cold solution of 170 grams of sulphuric acid of 1.84 density in 1.3 liters of absolute alcohol. The sulphate is subsequently precipitated by the slow addition of ten liters of ether.—Duilius. "Chemiker Zeitung," volume 54, pages 182.

Lycopodium Substitute

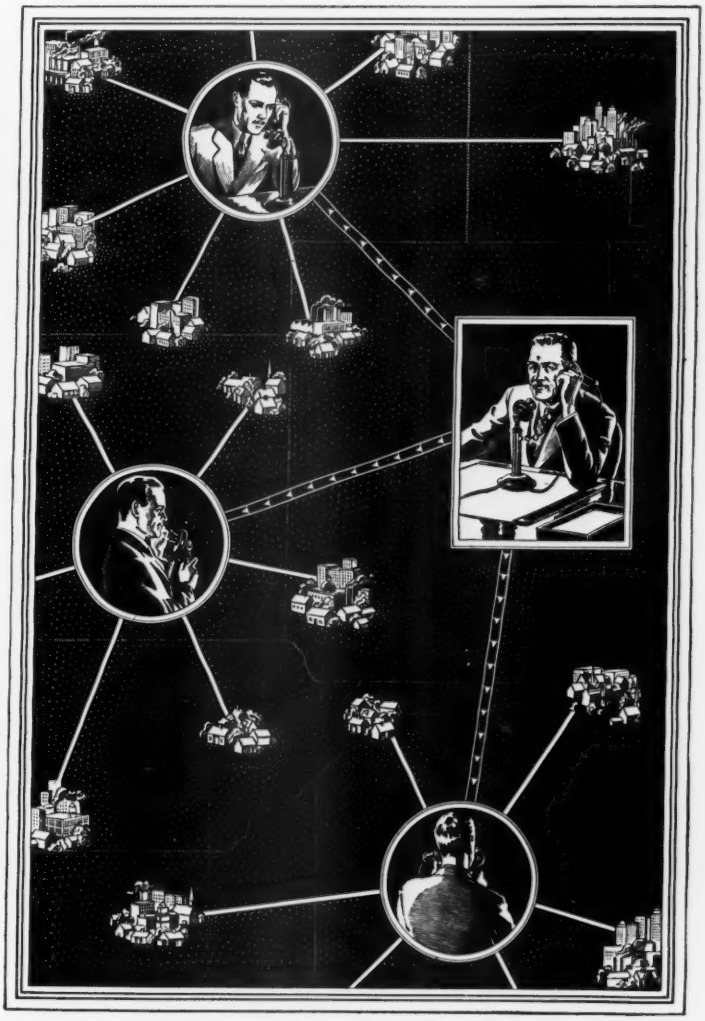
In the manufacture of an artificial lycopodium, the starting point is potato starch. The starch is impregnated with carnauba wax and then this mixture is treated with a little magnesium carbonate. The quantities used are as follows: 980 parts by weight of starch, ten parts by weight of carnauba wax, and ten parts by weight of magnesium carbonate. It should be mentioned that the difference between true and artificial lycopodium can be told particularly by the fat content, which amounts up to fifty per cent. in the case of the true lycopodium.—"Apotheker Zeitung."

(Continued on page 261)



Developing Business by Telephoning customers from Key Towns

THE Key Town Plan of telephoning is so flexible that it will fit practically any sales program. A building materials company needs to keep in close touch with customers over a wide area in four Western states. Its salesmen visit certain key cities in person and telephone those nearby. In this way, they can contact each customer more frequently and at less expense. Learn beforehand of new building projects. Handle orders more promptly. Communicate with the home office on new developments accurately and without delay.



A rubber footwear company co-ordinates its Key Town activities with the weather. Representatives maintain close contact with customers regularly in person. Then when stormy weather breaks, they immediately telephone, using Sequence Calling Lists to put the calls through in quick succession. The result is a rush of orders.

The Key Town Plan can be custom-fitted to your business. The local Bell Business Office will gladly have a representative show you how it will build business and cut selling costs. Telephoning is inexpensive. Typical station-to-station day rates: Philadelphia to New York, 50c. Chicago to Seattle, $6.50. Atlanta to St. Louis, $1.95. For all inter-city business, the telephone is *Quick . . . Effective . . . Convenient.*

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AMERICAN TELEPHONE & TELEGRAPH CO AND ASSOCIATED COMPANIES

Drug Industry Stocks

1930 Aug. 31 Bid	1930 Aug. 31 Asked	1930 High	1930 Low	1929 High	1929 Low	ISSUES	Par $	Shares Listed (000 Omit.)	Earnings per share An. Rate		1929 $
						NEW YORK STOCK EXCHANGE					
132⅛	132⅜	156½	108½	184¼	86	American Can	25	2,474	$4.00	†	6.86
148	151	148	140½	145	133¼	pfd	100	412	7.00	†	48.17
14⅛	14⅜	33	9¼	55	20	American Com'l Alcohol	No	382	1.60	*	2.59
60	61	69¾	55	85⅛	40	American Home Products	No	611	4.20	‡	2.67
7⅛	8	22⅛	6⅛	...	...	American Solvents & Chem. Co.	No	...	...		...
14	18	33½	17½	...	...	pfd	No	...	...		...
58⅛	59½	64¼	50	...	...	Colgate-Palmolive-Peet Com.	No	1,999,970	...		...
101½	102⅜	102¼	97	...	...	6% pfd	100	151,449	...		...
16¼	16⅜	22½	11⅛	23⅛	12	Container Corp. Class A	20	279	1.20	*	1.23
4½	5	8⅛	3½	11⅛	3⅛	Container Corp. Class B	No	588	...	*	0.14
17	17⅛	33	15⅛	82½	18	Coty, Inc.	No	1,493	2.00	*	2.46
82½	82⅞	87⅛	67	126⅛	69	Drug Incorporated	No	2,941,776	4.00	†	3.10
65	74¼	65	49	79⅛	40	House Hold Products	No	575	3.50	‡	2.64
93	93⅛	113	76⅛	157⅛	80⅛	Lambert Co.	No	699	8.20	*	7.79
27	27⅛	36	22⅛	68⅛	28	Lehn & Fink	No	419	3.20	‡	2.20
17	17⅛	37⅛	14⅛	59	21⅛	McKesson & Robbins. Com.	No	1,911	2.00	‡	1.50
39	40	49⅛	35	63	40	pfd	50	421	3.50	‡	5.13
46⅛	47	63⅛	35	80⅛	47	Monsanto Chemical Co.	No	398	1.25	*	4.44
46¼	47	60¼	45⅛	87⅛	43	Owens-Illinois Glass Co.	25	827	...	*	4.04
103	103	107½	100	...	...	Peoples Drug Store	No	...	...		...
17	19	27⅛	16¼	65⅛	50	Sharp & Dohme	...	...	...		...
56	60¼	63⅛	54	65⅛	50	Sharp & Dohme pfd	No	777	...	a	0.88
71	72	139⅛	59	243⅛	67	U. S. Ind. Alc.	No	373	6.00	‡	5.30
...	...	...	...	...	...	pfd	...	...	...		...
2	2½	7⅛	2½	13½	3	Vadsco Sales	No	971	...	*c	0.86
						NEW YORK CURB					
⅛	⅜	1⅛	⅛	7½	⅜	Allison Drug Stores Class A	No	70	...	e	...
⅛	⅜	⅜	⅛	5⅛	⅜	Allison Drug Stores Class B	No	95	...	e	...
147	155	184¼	140½	210	130	Ches. Mfg. Co.	25	120	4.20	†	8.49
⅜	½	1	½	57½	2	Davis Drug Stores Allot. Ctfs.	...	...	...		...
⅜	3½	7⅛	3	26½	3½	Helena Rubenstein	No	289	...	‡	1.13
12	15	23	12	41½	17⅛	Heyden Chemical Corp.	...	150	...	†	2.02
...	...	7⅛	6⅛	24¼	6½	International Perfume Com.	No	392	1.00	g	1.02
...	...	71	67	...	...	$6 Cum. Pfd.	No	61	2.75	g	8.81
...	...	...	...	...	...	May Drug Stores	...	...	...		...
82	83	90	55½	67¼	40	Mead-Johnson	No	165	3.00	‡	3.30
1	1⅛	3½	1⅛	12	1⅛	Nauheim Pharmacies Com.	No	97	...	*	Nil
2½	7½	6½	3⅛	32¼	2	pfd.	No	45	...	*	0.71
1⅛	1⅛	1¼	1⅛	13	2	Neve Drug Stores, Com.	No	170	...	h	...
20⅛	21	42	19¼	52	21½	Newport Co., Com.	No	405	2.00	*	2.18
...	35	38	32	46½	29⅛	Northam Warren Corp. Pfd.	No	50	3.00	g	10.35
5⅛	9	42½	31	58⅛	40⅛	Parke Davis & Co.	No	4,770	1.00	†	1.73
7⅛	7⅛	23⅛	4½	34	10⅛	Stein Cosmetics, Com.	No	60	...	i	...
7⅛	7⅛	9½	6⅛	18	6⅛	Vick Financial Corp.	10	750	...	j	...
30	31	61	28⅛	107⅛	35⅛	Walgreen Co., Com.	No	834	...	‡	1.63
10⅛	11	21⅛	8⅛	44¼	13	Zonite Products Corp.	No	176	1.60	*	1.31
						CLEVELAND					
69	70	100	65	80	60	Dow Chem. Co.	...	...	...	..	...
106	106	106½	103	...	...	pfd.	No	25	1.60	..	...
29½	29½	32½	22	42	20	Miller Wholesale Drug Com.	...	...	...	..	...
16	17¼	21	17¼	51	34	Weinberger Drug Com.	No	30	2.00	..	...
						CHICAGO					
41	42	46½	35	52	36	Abbott Laboratories	No	120	2.00	†	3.86
28⅛	28⅛	42⅛	27⅛	73	28⅛	Katz Drug Co., Com.	100	100	2.00	..	...
1	1½	6	1	29½	2	Lane Drug Co., Com VTC.	No	95	...	g	0.92
3	3	15	3	32	14	Cum. pfd.	No	65	2.00	g	3.00
						CINCINNATI					
11⅓	12	108	10	41½	16	Dow Drug Co.	No	90	1.00	..	...
100	100	107	100	125	102	pfd.	100	400	7.00	..	...
...	...	...	...	...	...	Standard Drug A	...	...	...	..	...
						BALTIMORE					
	31	33½	30	39⅛	25	Emerson's Bromo Seltzer	No	56	2.00	..	...
						UNLISTED					
...	...	...	...	...	...	Heyden Chemical Corp. pfd.	...	...	...	..	...
75	83	...	...	...	...	Merck pfd.	...	...	...	..	...
...	...	...	...	...	...	Noxzema Chem. Co	...	...	...	..	...
...	...	...	...	...	...	Squibb Com.	...	...	...	..	...
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† Yr. Dec. 31, '28.
* 9 mos. Sp. 30, '29.
‡ 6 mo Je, 30, '29.
a 8 mos. Au. 31, '29.
b 3 mos. Sp. 30, '29
c Before Fed. Tax.
d Yr. Je. 30, '29.
e None Reported.
f Incorporated in April, 1929
g 10 mos. Oct. 31, '29.
h Controlled by United Cigar Stores
i Incorporated in Dec., 1928.
j Affil. with Vick Chem. Co.

Neve Drug Stores, Inc., New York, was petitioned into bankruptcy by United Cigar Stores Co. of America, $291,179; Consolidated Dairy Products Co., $9,500; Henry Kelly, Jr., Inc., $4,800. The position alleges that on August 29 the company admitted in writing its inability to pay its debts.

American Home Products Corporation and subsidiaries, report for six months ended June 30, net profit of $1,583,189, after depreciation, Federal taxes, etc., equivalent to $2.59 a share on 611,000 shares of no par stock, comparing with $1,597,693, or $2.67 a share on 599,000 shares in the first half of 1929.

Drug Stocks Steady

Prices of common stocks of drug and cosmetic companies show little variation over the last four weeks and still continue above the low for the year, reached in June, according to the index of the Standard Statistics Company, of New York. The prices of 337 miscellaneous industries show a slightly upward trend. Detailed figures on both indexes follow:

		1926 equals 100 Drugs and Cosmetics 337	Industrials
Aug.	6	152.4	141.9
	13	146.8	134.7
	20	143.4	138.3
	27	143.7	139.9
Sept.	3	144.3	140.4
1930	High	174.7	174.1
	Low	136.1	130.6
1929	High	260.6	218.9
	Low	158.8	134.5

Drug, Inc. Earns Less

Drug, Inc., report net profits of $10,542,007 for the first half of 1930, after expenses, depreciation, interest and federal taxes, equivalent to $3.01 a share on the 3,501,499 shares of capital stock outstanding on June 30.

This compares with $7,430,135 for the first six months of 1929, or $3.10 a share on the 2,394,011 shares outstanding at that time.

The figures on earnings for the first half of 1930 include the earnings of Household Products, Inc., and Vick Chemical Co. for the full period January 1 to June 30. Both companies were added to Drug, Inc. this year. Another recent acquisition of Drug, Inc., was the Owl Drug Stores, with 106 stores in operation, mostly on the Pacific Coast.

McKesson Earnings Off

McKesson & Robbins, Inc., and subsidiaries, for the six months ended June 30, show profit of $1,457,715 after depreciation, interest and Federal taxes, but before deduction for minority interests amounting to $48,599. After deduction of the latter item, net profit was $1,409,116, equivalent after dividend requirements on the 7 per cent. preferred stock to 61c a share on 1,072,728 shares of common stock, excluding stock held in the treasury. This compares with net profit of $1,962,933, or $1.50 a share, on 859,870 common shares in the first half of 1929.

Colgate-Palmolive-Peet Company additional stock has been admitted to trading on the New York Stock Exchange in the amount of 71,700 shares of 6% preferred shares with a par value of $100.

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- Calcium
- Lithium
- Magnesium
- Methyl, U. S. P.
- Potassium
- Salicylic Acid, U. S. P.
- Salol, U. S. P.
- Sodium, U. S. P.
- Strontium, U. S. P.

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Some perfumes never lose their appeal; others must be moulded to new times, the odor modified, or perhaps completely revamped.

How long since you took stock of your perfumed products? Are you looking for an improved odor? Or do you think you could use a new one?

Here are a few suggestions.

Amber S
$28.00 lb.

A solid completely soluble in alcohol. Used in connection with powder and other oils, it gives heavy, lasting sweet effects.

Bouquet Eve
$150.00 lb. $80.00 lb.
64.00 lb. 40.00 lb.
30.00 lb. 24.00 lb.

Favorite for perfumes and powders, where its distinctive odor shows to great advantage. The oil is very strong and lasting. The different qualities will meet almost any price demand.

Bouquet C 5
$80.00 lb. $54.00 lb.
33.00 lb. 16.50 lb.

A complete line of oils of this popular imported style. For all perfume and cosmetic uses.

Bouquet C 22
$54.00 lb. $24.00 lb.
18.00 lb. 12.00 lb.

For powder, perfume, cream; in fact, a complete line. One of the most sought-after, modern French types.

Gardenia R 107
$16.00 lb.

Lower-priced version of the French type Gardenia. For every perfuming purpose.

Jasmin Diaphol
$78.00 lb.

So close to fine natural jasmin, that it is generally used 50-50 with natural.

Jasmin Alva
$28.00 lb.

For five years a leader in its field, used alone in creams, perfumes, toilet waters, and in hundreds of bouquet odors.

Jasmin H 9
$16.00 lb.

An excellent jasmin for creams. Flowery and true to natural jasmin types.

Jasmin 338
$10.00 lb.

A low priced oil for any use where the true jasmin odor is wanted. Non-discoloring.

Lilac Alva
$32.00 lb.

This is lilac-time. Compare Lilac Alva with a bunch of fresh lilacs.

Lilac Perli
$16.00 lb.

Naturalness is the outstanding characteristic of this oil. For perfume, toilet water, lotions.

Lilac Buds
$8.00 lb.

For all-round usefulness this oil is especially recommended. Its price is favorable.

Neither you nor we are in business for today only. Everybody in our organization realizes that --- and we work accordingly.

Haebler, Inc.

Lily Petals D $24.00 lb.	Like the finest imported lily oils, this is ideal for cream and all other perfumed products.
Locust 714 $9.00 lb.	Cream odors are in great demand. This locust is well adapted for the purpose, in odor and price.
Locust Blossom D $5.00 lb.	One of the most advantageous cream odors—flowery, pleasing, and priced extremely low.
Opoponax S. S. $24.00 lb.	This type of oil is used as a base by many Parisian perfumers. Fine perfume and powder odors can be built on it. Not intended to be used alone, but can be.
Powder Oil D.L.S. $12.00 lb.	The lasting type that women are seeking. A lively odor too, with a good lift.
Rose $3.50 lb. and up	For all uses. Prices from $3.50 lb. to $150.00 lb. Excellent numbers at $6.00, $8.00, $12.00, $16.00, $24.00, $32.00.
Sharima $48.00 lb. $18.00 lb. 14.00 lb.	An odor of to-day, sweet, lasting and popular. Especially for powder and liquids, but also good in cream.
Sweet Pea C $28.00 lb.	Of the more flowery type, this oil is popular for use in perfumed preparations of all kinds.
Sweet Pea C 1 $18.00 lb.	Lower-priced, true to nature, sweet. Some perfumers have used it for years.
Violet R 204 $35.00 lb.	Extremely fine. Well suited to the highest class violet toilet waters and perfumes, and for blending.
Cream Odors $4.00 lb. and up	We offer a wide variety of excellent odors in every price range.
Bath Salt Odors $3.00 lb. and up	Some makers of bath salt prefer oil and color combined; others use them separately. We have both, in several grades.
Disinfectant and Insecticide Perfumes $1.00 lb. and up	Oils for fly-sprays, moth preventives, etc. Those for paradichlor benzene come either with or without color.
Powder Odors $4.00 lb. and up	Oils suitable for powder, costing $4.00 to $80.00 per lb. Large selections at $12.00 to $20.00 and $24.00 to $36.00.
Soap Odors $2.50 lb. and up	A large number of soap perfumes can be suggested, at convenient price levels.

State your problem and send for samples.

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Origanum, Marjoram in France

Plant of shell-like flowered marjoram from this year's yield photographed August 26

MARJORAM, or sweet marjoram, as it is sometimes called, belongs to the family of labiates, represented by corolla or calyx divided into two parts. It is also designated under the names of *origanum majorana L.* (origanum marjoram), *origanum hortensis* (garden marjoram), true marjoram, shell-like flowered marjoram, and should not be confused with *origanum vulgare*, or wild marjoram, although, as a matter of fact, much of the essential oil of marjoram is known to commerce under the name of origan, or origanum. The marjoram plant is grown in a number of European countries, as well as in northern Africa, Tunis, the French colony, having succeeded particularly well with this culture.

This plant is known both to the perfumer and to the pharmacist, and it is, therefore, of interest to know that its cultivation in Europe is carried on in an extensive way. Much of the seed used by other European countries, like Germany, for example, is said to come from the Provence district of France, for the reason that the plants grown too far north will not ripen to the point of seed production. Exports from the south of France are, as a rule, in excess of the annual production possibilities, this condition making it necessary for purchase of plants elsewhere, especially to satisfy the herborists. For it must be said that the bulk of the marjoram grown is used by the pharmaceutical trade, and the culinary art in France. Furthermore, the seeds are employed by the confectioners for the purpose of making the better grade of comfits, or sweet-meats, and among certain manufacturing confectioners are very much sought after. It can be readily seen from the foregoing that marjoram plays a very important role in the lives of French men, women and children.

The marjoram plant, according to best available records, is supposed to have been brought to Europe at some time during the latter part of the sixteenth century. There still exists to-day a marjoram plant known as Oriental marjoram, from which the European culture, no doubt, originates. In Tunis marjoram is found growing in almost a wild state, particularly in the district of Bizerta. The plant, however, finds itself more at home in the forest of Sfax, near the large olive plantations. Both natives and Europeans are engaged in the raising of marjoram, the growing of this culture having been found profitable. Tunisian statistics do not make special mention of marjoram, but it is interesting to note from a report issued four years ago that the plantations reserved for this culture have steadily increased since the war, when the price per 100 kilograms went up to 320 francs for beaten and dried marjoram. This is particularly interesting when it is borne in mind that the price before the war was 60 to 80 francs. During the year 1925 prices went very high, bringing with them encouragement for further increasing the raising of this plant. In 1926 the production went to 200,000 kilograms.

In France the districts growing marjoram include: Bouches-du-Rhone, Vaucluse, Languedoc, Seine-et-Oise (Milly-en-Gatinais, for example), Alpes-Maritimes, where it grows wild. Certain districts of Morocco are also encouraging the development of this culture, and it is, of course, a matter of common knowledge that Spain, Hungary, and Germany raise

considerable amounts of marjoram for the world's markets. Opinion differs as to the quality of marjoram obtainable, many competent authorities claiming that the German product is much the best. Others again are just as emphatic in their approval of the French, thus leaving the matter open to decision on an individual basis, the user judging for himself as to which of the two products suits his particular needs.

Botanical Characteristics

The marjoram plant grows to a height of 20-40 centimeters (about 8-16 inches). It ramifies, and grows in bunches or tufts. The stems are semi-ligneous, or woody, small, well-set, reddish, slightly rough, or hairy, bifurcated at their tip. The leaves are opposite each other, small, oval, whitish and soft. They have a strong odor, highly aromatic, reminding one considerably of lavender. The taste is acrid and bitter. The flowers are small, greenish white, brought together at the top of the branches in round, globoid bouquets, characterized by bracts, small leaves or scales below calyx, in imbricated shells, which strike one at first sight, the flowers withering rapidly. The seeds are oblong, very fine, and dark brown in color.

It is considered a hardy plant, although in practically all of France it is regarded as being an annual, and the seeds are, therefore, sown each year, rather than holding the plants for other types of multiplication. Weather conditions in France, particularly during the past few years, have been so unsettled, as the trade knows, that a plant like the marjoram, somewhat sensitive to the cold, must be planted anew each season.

The species grown in Tunis is slightly different from that grown on the continent, especially that raised in the southern regions of France. Plantings effected in certain parts of Tunis have brought out the fact that the climate has a great deal to do in bringing about this difference. The Tunisian marjoram also grows to a greater height, and may attain a meter, or over three feet, with branches as high as eighty centimeters. Furthermore, the leaves are smaller, and lighter in color. The flowers, which are small, bloom in the month of May, and they are a greenish white. Seeds reach their maturity during July, as a general rule.

Seeds for sowing are selected from the best plants available, and, nearly always, the seeds are first planted in a nursery, and the plant, when hardy enough, is then transplanted. Occasionally direct sowing is resorted to, although, apparently, the best results are attained by passing the plants through a nursery period first. Marjoram should always be placed in ground that receives a great deal of sunlight, and the soil should be kept very well fertilized and watered. True, the marjoram plant resists drought very well, but everything possible should be done to keep it from going through too long a dry period. Soil located in the neighborhood of a small stream, and which thus is naturally irrigated, has been found to give excellent yields, both as to quantity and quality.

During the development period the most important things the marjoram calls for are frequent weedings and hoeings, and, as already suggested, frequent watering. A certain malady, known as rust, oftentimes cuts down the production. This is very hard to combat, or treat, for the reason that many of the preparations used for this purpose can not be utilized, as they would at once bring about a deterioration of the yield.

Gathering Time and Utility of Marjoram

In sections like Milly-en-Gatinais (Seine-et-Oise), and Saint-Remy (Bouches-du-Rhone), the gathering time usually falls throughout the months of August and September. This season changes, of course, when weather conditions are altered, as was the case this year. Practically all crops of this character, particularly in the north of France, suffered set-backs, as the French summer for this year was practically devoid of sun in the northern districts.

Gathering time in countries like Tunis is normally placed during the first part of May, when the flowers begin to open. A second cutting is taken some time during July.

When rust attacks the leaves, the plants are frequently allowed to go to seed, as the leaves, naturally, because of this malady, lose practically all of their value. The seeds produced help to cover the loss that is suffered through the attacks made by rust. Furthermore, there are times when it is more profitable to raise the plant for seeds rather than the leaves, particularly during years when seeds for sowing purposes are scarce.

Marjoram plants destined for the distilleries are cut when in full blossom, and the yield is, as a rule, taken in around sundown, during the fine, dry and warm days of the season. If the soil permits, the whole plant is removed, which method is preferred to that of cutting, for the reason that the drying process is much more easily carried out under these conditions. Those plants which are not destined for distillation the same day are allowed to remain on the ground at least until the following day at sundown, to permit them to dry sufficiently, in this way avoiding detrimental heating of newly cut plants.

In a recent interview with some of the largest growers of marjoram in France, the writer was informed that the drying process for this plant is an exceedingly delicate operation. This is particularly true as applied to the carefully selected and cleansed leaves of the marjoram, as they will readily become discolored if the yield has been carelessly handled. Sun-drying is very rapid, but the best results are obtained in *sechoirs*, or drying-sheds, into which

Weeding a fine field of shell-like flowered marjoram in the Seine-et-Oise Department of France

sufficient air can be directed, but which are so built that the sun does not hit the plants being dried. Furthermore, the sun reduces the aromatic qualities considerably, and renders the leaves more brittle than when they are dried in sheds protected from the sharp rays of the sun. Another disadvantage when using the sun method is that the branches break during the beating process, thus directly influencing the quality of the leaves. Much care must be exercised to keep the plants from contact with rain and dew, once they have been subjected to the drying process. Only by following some of the foregoing precautions, can the green tint be preserved, without which the leaves do not bring as high a market price. If the sun is used for drying, usually two to four days, depending upon climatic conditions, are deemed sufficient. In the *sechoirs*, or sheds, well ventilated, but protected from the sun, anywhere from 5 to 8 days, as a rule, must be allowed for.

In order to detach the dry leaves different methods are used, but the usual system is that of the stone roller. The entire plant is also beaten, say with a wooden fork. When the branches and stems have been completely stripped of leaves and seeds, these are then passed through a hand sieve, in order to get rid of the seeds. Pieces of branch, etc., are removed by hand.

The yield per acre depends upon the fertility of the soil, irrigation facilities, fertilizers used, and, most important of all, considering everything, the care given the crop during its development period.

Essential oil of marjoram is obtained by distilling the plant, leaves and stems. The result is a pale yellow or somewhat greenish yellow liquid. Density is 0.892 to 0.908. The rotary power is given as +130 to +18°, with one volume of oil soluble in one to two volumes of 80° alcohol. Borneol content approximately 85 per cent. Contains no phenols.

During the development period in the fields the marjoram suggests the odor of basil, later taking on the aromatic qualities of lavender.

In the toilet preparations trade the essential oil is used by the manufacturers of soap, particularly certain types of toilet soaps. It is also used in various extracts, to give a herb-like odor. The Greeks, who, in ancient times, were great users of perfumes, reserved marjoram for the hair and eye-brows, it being employed in the form of pomade.

The dried leaves are used by the manufacturer of toilet preparations to produce a powder which can be used in sachets.

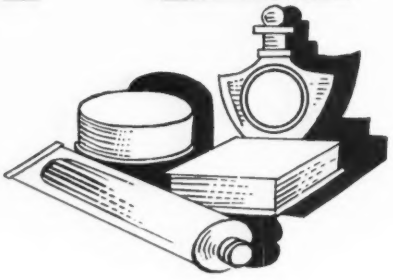
The use of marjoram in melissa water formulae is, of course, a matter of common knowledge. One such formula, taken from Fouquet, and in which the essential oils are used, should prove of interest:

Lavender, essential oil of	1 gr. 25
Marjoram, essential oil of	1 gr. 25
Lemon, essential oil of	1 gr. 25
Hyssop, essential oil of	0 gr. 65
Thyme, white, essential oil of	0 gr. 30
Rosemary (eperlee), essential oil of	0 gr. 50
Coriander, essential oil of	25 drops
Cinnamon, essential oil of	25 drops
Mace, essential oil of	0 gr. 75
Anise, essential oil of	0 gr. 25
Sage, essential oil of	1 gr. 50
Tolu	2 gr. 50
Melissa (balm-mint) alcoholate	0 lit. 50

In Crete marjoram is the symbol for honor, and in Sicily it is given the power of driving away the seducer. The ancients, who called it *amarakos*, used it to garland newly married couples.

(Continued on page 271)

PERFUME OILS



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Sole Agents in the United States and Canada for
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Miltitz, (*near Leipzig*) Germany

The Literature says:-

(*Continued from page 254*)

Hair Wash Containing Cholesterin

Such hair washes are best prepared with the aid of anhydrous lanolin, for the reason that this substance contains a large amount of cholesterin. The preparation is carried out in a manner similar to that of lanolin milk, and as much water as possible is added to the mixture without disturbing the emulsion. When the proper care is taken, this offers no great difficulties. Thus ten parts by weight of anhydrous lanolin are mixed with twenty parts by weight of water and then half a part by weight of soap dissolved in twenty parts by weight of distilled water are added. This mixture is thoroughly triturated in a mortar and then from two hundred to two hundred and fifty parts by weight of warm water and 5 c. c. of tincture of benzoin are gradually added.

In another formula fifty parts by weight of anhydrous lanolin are mixed with twenty-five parts by weight of coconut oil, the same proportion of soap powder eight parts by weight of powdered borax and eighty parts by weight of water, and the mixture is heated. The mixture is triturated in a mortar. Then a mixture of four hundred parts by weight of rose water, the same proportion of orange flower water, 0.2 part by weight of oil of bergamot and the same proportion of tincture of musk are added in small quantities at a time while the mixture is being continuously triturated. Still another formula calls for the solution of one part by weight of cholesterin in 98 parts by weight of 90 per cent. alcohol and the addition of half a part by weight of castor oil as well as the same proportion of heliotropin.—"Med. u. Pharm. Rundschau."

Foaming Toothpaste

This product contains seven and one half parts of pulverized medicated soap, 3.75 parts of extract of pulverized soap bark (quillaja), 480 parts of precipitated calcium carbonate and as much soluble carmine and aromatic oils as desired together with 120 parts of glycerin-gelatin mixture. The glycerin—containing gelatin solution is made from seven and one half parts of white gelatin, 120 parts of distilled water and 210 parts of glycerin. The following mixture is used to perfume the preparation:—3.75 parts of oil of rose, 7.5 parts of oil of cinnamon, 33.75 parts of oil of caryophyll, 2,625 parts of lemon oil, 90 parts of tincture of vanilla and 270 parts of alcohol.—"Pharm. Monatshefte."

Skin Cream

A superior skin cream is made from equal parts of eucerin (pure form) and distilled water. A mild flower composition is used for perfuming the cream. Nothing very accurate is known about the composition of this cream, but it has been determined that it contains the aforementioned substances. Eucerin anhydricum, as is known, consists of a mixture of five parts of oxycholesterin recovered from wool fat and ninety-five parts of white vaseline. This type of cream may for example be composed of the following ingredients:—five hundred grams of eucerinum anhydricum, six hundred grams of rose water, five grams of aubepine and half a gram of artificial rose oil. It is understandable that another perfume may also be used.—"Pharmazeutsiche Zentralhalle."

Dyed Degreasing Hair Powder

The following mixture can be used for removing the oil and grease from hair. It consists of three hundred parts by weight of pulverized boric acid, two hundred and fifty parts by weight of pulverized wheat starch, two hundred parts by weight of precipitated barium sulphate, one hundred and fifty parts by weight of pulverized violet root and fifty parts by weight each of magnesium carbonate and precipitated calcium carbonate. The addition of umber brown, ocre and Frankfurt black allows any desirable shade to be obtained in the powder.—"Deutsche Parfuemeur Zeitung."

Oil for Treating the Skin

Three interesting formulae are given. The first calls for the use of six hundred parts by weight of olive oil or peanut oil, 380 parts by weight of paraffin oil and twenty parts by weight of Siberian pine needle oil. These ingredients are mixed together. In place of the pine needle oil there may be used eucalyptus oil or methyl salicylate. In the second formula, four hundred parts by weight of peanut oil, five hundred parts by weight of white vaseline oil, eighty parts by weight of castor oil and twenty parts by weight of Siberian pine needle oil are mixed together. The third formula calls for the use of eight hundred parts by weight of peanut oil, 190 parts by weight of paraffin oil and ten parts by weight of knee pine oil (Pinus montana pumilio). These oils are often mixed with various pharmaceuticals such as euphorbium, croton oil, cantharides, etc. The oils, when used for treating sunburn, are made thin.—"Pharm. Zeitung."

Massages

A patented massage or skin food was found to consist of vegetable oils, animal fat and essential oils. An effective skin food can be obtained by mixing together seven hundred parts by weight of olive oil, three hundred parts by weight of liquid horse fat, eight parts by weight of chamomille extract and ten parts by weight of Roman chamomille oil. The oil and the chamomille extract are heated in an enamelled vessel, until the entire liquid becomes clear. The mixture is then allowed to cool off and then the essential oil chamomille oil, is added.

The following mixture has also been found to be advantageous for this purpose. The mixture consists of five parts by weight of camphor, one quarter of a part by weight of menthol, and one hundred parts by weight of olive oil. Essential oil is added to perfume the mixture.—"Apotheker Zeitung."

Oxygenated Face Packings

The loam used as a base for these packings must be very finely elutriated and sterilized. It is mixed with a suitable perfume and also with an oxygen—containing chemical, such as sodium perborate or magnesium peroxide. The mass is then made into paste form with glycerin water, which can contain some vegetable glue in order better to maintain the distribution of the loamy mass. Enough of these substances are used so that the proper consistency is obtained. The keeping qualities of such a preparation are not very great. It is also possible to prepare this cosmetic from white bole, which has been sterilized, or infusorial earth, and to use a stearin cream for making up the mixture.—"Pharmazeutische Zeitung."

Examination of Orange Oil

Orange oils obtained from seven typical samples of South African Valencia and Naval oranges, have characteristics falling within the following limits:—density at 20° C. 0.8465-0.8493, index of refraction at 20° C. 1.4723-1.4732, specific rotation at 20° C.+107°48′—114°54′, boiling point 174.6° to 174.8°, 760 millimeters, evaporation residue 4.35-5.47%, citral 1.7-2.31%, iodine value 302-314, Reichert-Meissl value 0.3-0.7, Polenske value 0.5-1.0, free alcohols 1.4 to 1.8 %, total alcohols 2.6 to 3.3%, acid value 1.1-1.7, ester value 4.2-6.5, saponification value 5.3-8.1, aldehydes 1.7 to 2.3 per cemy, and the yields of oil are 0.93 to 1.72%. This figure is based on the peel.

These constants compare favorably with four other commercial oils that were examined, including one prepared from Italian Navels by the same method. The South African oils seemed to have a more penetrating and more pleasing aroma. Oranges should not be stored for longer than two months before extracting the oil; otherwise the resultant oil has higher density, refractive index, iodine and saponification values, and a lower aldehyde content. Unless the oil is stored in a cool, dark place it deteriorates and at the same time the refractive index saponification value, and total alcohol content increase and the rotary power and iodine value decrease.—F. L. de Villiers, "Farming in South Africa," Jan. 1930.

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giving a note of rich verdure
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Perfectly stable *Non-irritating*

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Citrus Oil Report

P. R. Dreyer, Inc., reports that his principal, Poolo Vilardi, Reggio Calabria, Italy, sends the following report on citrus oils:

"The serious business depression which has affected the markets of the entire world has no doubt contributed to bring the price of oil of bergamot to a level so low as has never been the case before. This low level has been reached in spite of increased exports during this year.

"It is claimed, however, that this price means an actual loss to the producers of the fruit as well as the oil. The reason for this is that the price does not cover the upkeep of the orchards nor the cost of producing the oil, nor the high taxes laid on the land and the industry.

"Not only the producers, but the Government as well, realizes the seriousness of the situation and for this reason a meeting of all important producers was called at the city hall of Reggio Calabria, Italy, with a view of finding some remedy.

"Many of the producers of bergamot have definitely decided to discontinue the production of this item and in its place produce other crops which would be more remunerative.

"While it is rather early to foretell what may be expected from the new crop, it is not believed that the crop will be very large. There are many reasons for this which are outlined as follows: The rapid changes of temperature and the extreme heat during the months of June and July have caused much small unripe fruit to fall. Also producers have seriously neglected their orchards because of the uninteresting prices prevailing.

"Almost the same situation as in bergamot prevails in orange oil but not quite as serious. The money returns are uninteresting to growers. Many producers of oil are holding on to the little supply available instead of selling at the present prices.

"The new production is believed to be about normal. At present there is no indication as to future prices. Should there be a good demand for fresh fruit the price for oranges for oil production will also advance. This is bound to cause an advance in the price of oil.

"Considering the fact that conditions in Italy are on a higher level than they were in times past, lemon oil is selling at its lowest level; especially when the revaluation of Italian money is also taken into consideration. The low price has caused a considerable increase in the consumption of oil and it is reported that the hold-over stocks are much lower than in past years.

"It is expected that the new crop will be smaller than normal. In some districts the outlook is favorable but in others it is just the reverse. Should any sudden unforseen damage occur to the orchards a decided shortage is anticipated.

"Much effort is being made by the growers to increase the consumption of fresh fruit and should this materialize then much smaller amounts of fruit will be available for pressing purposes."

Lamoureux Leaves Newport

L. P. Lamoureux, recently of the Rhodia Chemical Co. division of Newport Company has resigned his position as sales manager, a position which he has held for three years. Mr. Lamoureux has just returned from a vacation at Murray Bay, Canada. Prior to his connection with Rhodia Chemical Co., Mr. Lamoureux was director and sales manager of Belgian Trading Co. for six years. He has long been prominently identified with the perfume and cosmetic field, having served as sales manager for Richard Hudnut, and also with Armour Soap Works covering the early development of toilet soaps and toilet preparations. For a period of five years, Mr. Lamoureux traveled throughout Europe appointing and directing sales agencies for the sale of soaps and toilet preparations.

Earl H. Farmer Dies

Earl H. Farmer, assistant general sales manager, Owens-Illinois Glass Co., died very suddenly August 29. Mr. Farmer entered the employ of the Owens Bottle Co. as a stenographer and rose by sheer merit to the high position he held at the time of his death.

{ Editor's Correspondence }

Editor, Drug Markets:

There has been considerable comment regarding our using the glass jar, as well as the tin tube used for Ingram's Shaving Cream, over our signature in our advertising in your magazine. It has been inferred that we have shown some interest in the people who are making the jar.

The explanation is, that Ingram's Shaving Cream has been sold in a jar for years, and will be continued in this package. It is our belief, that were we only to show a tube, a good many people would arrive at the conclusion that the tube has replaced the jar, which it distinctly has not. For the protection of the shaving cream manufacturer, we feel that it is well to show the jar also, until this fact becomes generally recognized.

Yours very truly,
SUN TUBE CORPORATION,
FRANK J. LYNCH, *President.*

Mr. Chilson Corrects

I wish to correct an error which I made inadvertently in my article on the manufacturer of heavy pastes in the August issue. I said: "Since there is no standard machine available for filling heavy pastes it is necessary to adapt other filling machines for this purpose." This is not correct. When I wrote it I was thinking of machines common to our own industry and failed to take into consideration machines available in other industries. I have since learned of an efficient high speed paste machine. This machine has been used for this purpose and is used extensively for glues and paste, cup grease, clays and peanut butter—all of which are as difficult to fill as any preparation common to our industry.—*Francis Chilson.*

Dr. Charles Luedeking, directing chemist for the Mallinckrodt Chemical Works, St. Louis for more than thirty years, died August 24. He was in his seventy-fourth year.

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UNCO BRAND oil is available in original 57 gallon drums or in 6 and 1 gallon cans, quart and pint cans, all shipped to the purchaser in the original Italian packages.

We recommend covering for your future Olive Oil requirements at this time, as prices are very low at present. Recent advices from Italy indicate advancing markets in the near future and the market has already reacted upward from its low point.

UNGERER & COMPANY
NEW YORK

Market Facts From Grasse

¶ Jasmine Prices Lower

¶ Situation Catastrophe for Growers

¶ Lavender Prices May Go Lower

¶ Rose Geranium Plantations Lose Importance

By O. C. Zilisch
Our Grasse Correspondent

THE summer season in France, up to the last days of August, was unusually cool, with the northern sections receiving rain almost daily over a long period of weeks. In the Grasse region the cool weather, comparatively speaking, was, naturally very welcome to the inhabitants and tourists, particularly as it was free from the discouraging rains of the north. Normal heat of other years however, has been lacking, and 1930 will, therefore, according to those close to the soil, go down as being one of the worst for the perfume-flower growers. Whenever Grasse and the surrounding country deviate from the normal in weather the flower grower suffers intensely, especially with market conditions such as exist at the present time.

As signalled during the past few months, the jasmine situation for this year is a very discouraging one for that body of growers who did not come in under some contract arrangement or other. The price paid the growers last year, it will be remembered, was 15 francs (60 cents) per kilogram, a price which everyone said was absolutely below what it should be, if the grower is to cover his constantly increasing production and gathering costs. Several months ago the prediction was offered that this year's price would see a distinct downward trend, and this has been borne out by the price finally established, namely 10 francs (40 cents) per kilogram for jasmine flowers delivered to the distilling perfumer's place of business, or 9 francs 25 centimes (37 cents) per kilogram on the spot. Furthermore, as suggested in our previous report, the gathering time will, with these prices, extend only to September fifteenth, instead of the tenth or fifteenth of October, as usual. Flowers gathered following a rain to be paid half the prices just cited. Jasmine flowers when soaked with rain are not considered as being worth as much. In fact, the distilling perfumers years back used to refuse flowers coming under this category. The concession of at least half price is fair, considering the attitude taken with regard to rain-soaked flowers formerly.

In addition to the price situation, there is the matter of securing competent labor, at not too high a price, for the gathering. This is, of course, an old story by this time, but a discouraging one just the same for the growers, who feel that they are losing money each year.

Will Conditions Rebound to Distillers' Disadvantage?

Some call this year's situation a veritable catastrophe, pointing out that this is, of course, exactly the condition wished for by the distilling perfumers, in order to bring about a shrinkage in yield. These tactics, according to some of the growers, may work out very finely for the distillers, but they emphasize the fact that changing economic conditions since the war do not permit the grower to stand up under them as he used to back in the old days. It is now said that the catastrophe will be a greater one than any in the history of the region, and it is further pointed out that the distilling perfumer is playing with a very dangerous rebound. This view may, however, be exaggerated, as such views have been from time to time. There is this difference, however, and that is that prices for everything, the general cost of living, have gone up, leaving the grower of perfume-flowers in the position of trying to combat an old situation with entirely new conditions, something which, it is claimed, can not be done successfully. At any rate, the results of this year's developments will not be long in showing themselves for what they are, and the more optimistic view should, after all, be taken. Everything seeks its own level sooner or later, and this holds true of the perfume-flower region of Grasse, which has, it must be admitted, passed through several very discouraging years, due to adverse climatic conditions, high cost and scarcity of labor, etc.

The somewhat unbalanced economic conditions of the entire world have, naturally, affected the situation in Grasse, and the demand for essential oil of jasmine has suffered a consequent decrease, together with many other of the staples. Such a decrease could only result in a desire on the part of the distilling perfumers to produce an equilibrium that will allow for a readjustment all the way around.

Taking up the actual market conditions in Grasse with regard to jasmine, it should be pointed out that approximately one-fifth of the production is grouped in co-operatives. The total production figure for these co-operatives is 400,000 kilograms of flowers, 100,000 of which have been placed with the distilling perfumers. The remainder of the production, unsold, will be treated in the factories of the co-operatives themselves, the reason for this being that the distilling perfumers objected to dealing with the co-operatives, due to the fact that they have recently formed a federation, based upon the premise of protection to the groups concerned. Some 200,000 kilograms were sold by agreement at 12 and 14 francs (48 and 56 cents) per kilogram. All of the rest of the yield for this year, about 1,000,000 kilograms, remains what is called *production libre*, or free production. In other words, it is this latter category that falls under the 10 francs and 9 francs 25 centimes (40 and 37 cents) per kilogram, delivered on spot, respectively. Some purchases were, it is stated, even effected at 8 francs (32 cents) per kilogram.

Some of the growers were forced to make the rounds of all the distilling perfumers, in order to liquidate their yield, and the sales were often made, according to those close to the situation, at the price offered by the distilling perfumer, which the grower had to accept if he wanted anything at all for his year's work.

With the somewhat below normal summer passed through, it can be safely figured, perhaps, that the yield for this year, with the gathering limit placed at September 15, will not reach more than half that of a normal season for jasmine.

Prices paid the gatherers remain at between 5 and 6 francs (20 and 24 cents) per kilogram, and these together with the high cost of all kinds of labor make it practically impossible for the growers to even recover their expense for this culture. This is

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particularly true in view of the fact that a considerable number of plantation owners have placed their output on a half-profit sharing basis.

Predictions for 1931 Interesting

Predictions for next year are, no doubt, premature, but the statement is heard on all sides to the effect that very many of the older plantations will be completely destroyed. Furthermore, those which remain will be given only the actual care required to keep them from deteriorating too much, and the growers will mark time, feeling their way and seeing what else they can raise that will assure them a livelihood. With any sort of a demand for jasmine oil developing this year, and the early part of next, to reduce the stocks, some interesting developments may be looked forward to with the approach of the 1931 jasmine season.

Lavender gathering is, at this writing, progressing along normal lines, but the yield is expected to go below that originally predicted for this culture. This does not apply to the cultivated lavender plantations, which will, according to all present indications, produce a crop that may be regarded as normal. Much of the lavender growing wild could not be gathered this year, because it is so hard to get at, requiring labor that is costly.

The price paid for lavender this year is between 40 to 50 francs ($1.60 to $2) per 100 kilograms, not enough to pay the high labor and other costs, this again bringing discouragement to the growers.

With a crop about two-thirds normal, as estimated, there may be a rise in price for lavender oil, which, on the 15th of July, was quoted at 140 francs ($5.60) for the 40 per cent. quality. This price is, naturally, so low that the distillers of lavender are not very eager to treat this culture. In fact, a number of deals are said to have been consummated at 120 to 130 francs ($4.80 to $5.20), prices which will give an indication of the crisis existing in lavender.

The entire trouble is over-production, as large lavender plantations have been established by persons who used to raise wheat and grapes. They have changed over to lavender, due to the unfavorable conditions existing on the wheat market, and everyone knows that France has had too much wine in stock for several years, that is comparatively speaking. These large lavender plantations have, of course, thrown the entire situation out of tune, and it is thought that further reductions in prices may result. In this connection, it should be borne in mind, however, that the shrinkage in this year's yield, if it becomes a fact, may react the other way. This remains to be seen, the lavender fairs held each year giving the actual status of the lavender situation. These fairs are, as a rule, held during the last days of September.

What has happened to the lavender situation is common to that of some of the other cultures, which are now being produced on ground which will allow for the operation of tractors, and other modern agricultural machinery. This new method of working the soil can not, of course, be applied to some of the stony districts of France, known for years as the source for much of that country's lavender. Some of the growers in the Grasse region, faced with the necessity of working terraced ground, are having this same type of development to meet, through the establishment of large plantations on flat soil.

Gathering of the mint is, at the present time, being carried out in the region near Grasse, and the vicinity of Castellane (Basse-Alpes). The Castellane yield is usually gathered somewhat later than that of Grasse, namely the first days of September for Castellane, and the last days of August for Grasse.

This culture has lost its importance during the past few years, due, no doubt, to the large production of mint throughout the world. The prices have been very low for oil, and the prices paid the growers have been of so unprofitable a nature that this year's production will, in all probability, be way below what it should be under normal circumstances, even considering the market situation. Some of the growers are protected by contract with the distilling perfumers, but outside these there are very few growing the mint.

Prices paid the growers last year for this culture were between 50 and 60 francs ($2 and $2.40) per 100 kilograms, and it is thought the price this year will not go beyond 50 francs ($2), delivered to the distilling perfumer's place of business. Last year's prices were considered too low to cover the grower's expenses of production, and this year's price will, therefore, certainly not change this situation any.

Higher prices could not be paid the growers, for the reason that carry-over stocks are still relatively large. A stimulated demand for the oil, in view of the deficient crop this year, would, no doubt, bring about a distinct reaction upward. This is possible, for the reason that among a certain number of purchasers in the trade the Grasse mint seems to stand for a special quality, peculiar to this product. Furthermore, plantations have been abandoned in Italy, and all of these factors should bring about a rise in price. About the fifteenth of July the prices quoted were: 275 francs ($11) for Italian, and 400 francs ($16) for French.

Rose geranium plantations are not of great importance in the Grasse region, this being a culture which has also decreased in value during the past few years. The yield has every aspect of being a satisfactory one, considering everything. Prices to be paid the growers have not, at this writing, been established.

It is an old story now for the tuberose, a culture that is diminishing in importance each year, so far as the Grasse region is concerned, and this year's yield will be comparatively unimportant. The demand for tuberose oil, as signalled from time to time, has been so slow that the growers are no longer encouraged to cultivate the tuberose flower, particularly as it is a very hard culture to handle properly.

The state of the May rose trees are, at this time, very satisfactory, they not having been strained very greatly by this year's yield, which was, as the trade now knows, deficient. Weather conditions have been satisfactory, and the few rains in the district have kept the rose trees in fine shape.

Of especial interest is the fact that the orange trees which suffered so badly from the cold and snow of the winter of 1928-29 are, in many instances, staging an excellent come-back. Only those which were put entirely out of business can be figured into the final figures on the losses from that very inclement winter.

New Therapeutic Preparations

(Continued from page 250)

the properly prepared entire organ. Furthermore, these extracts are not standardized. Furthermore, the slight activity of preparations obtained from testicles makes it essential to increase the therapeutic action of the preparation by the addition of alkaloids, such as yohimbine and strychnine.

A new field for organo-therapy has been developed within the past few years in the treatment of pernicious anaemia with the aid of liver and stomach extracts.

Pernicious anaemia is a disease, which when not treated, causes death within a few months to a year or so. It is manifested particularly in a very characteristic change in the condition of the blood, in that the number of red blood corpuscles is greatly reduced, while the hemoglobin content is decreased not in the same proportion. In addition thereto characteristic degeneration phenomena and malformation of the red blood corpuscles take place. The therapy that was used principally and over a long period of time involved the use of arsenic. However, the results in most cases were only extremely unsatisfactory. The American investigators, Minot and Murphy, feeding with liver improved the condition within a short time, and often cured the patient. It was found to be

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immaterial as to the form in which the liver was eaten, raw, cooked, baked or as a dry powder. Extracts obtained from the liver under certain specified conditions have also proven effective. One method of preparing the extract is as follows:

The liver is suspended in water and the extraction is carried out at the isoelectric point, about pH equal to 5 to 6. The mixture is then heated, in order to precipitate the albumen at approximately 85° C., and it is then filtered after thirty minutes. The filtrate is evaporated to small volume under a vacuum and then as much 96 per cent. alcohol is added until a 70 per cent. concentrated alcoholic solution is formed. The precipitate, which is formed under these conditions, is filtered and the filtrate is evaporated to small volume. The filtrate is separated after the addition of absolute alcohol, dried under a vacuum and pulverized. The extract is thus obtained in the form of a yellowish powder of tolerably agreeable taste, almost entirely soluble in water. It can be precipitated from its aqueous solution by means of alcohol as well as acetone and it is insoluble in ether.

A preparation of considerably effectiveness is obtained in this way. The preparation, known as Hepatopson purum, made by the Promonta A. G., appears to be the purest known at present. Six-tenths of a gram of this preparation correspond to one hundred grams of fresh liver. Constant control by test is necessary in the preparation of this extract as in the purification of hormones. Due to the fact that the real cause of pernicious anaemia is still unknown and that it has not accordingly been possible to reproduce this disease in animals, the activity of the medicament must be tested on the patients themselves, and the effectiveness of a preparation is generally based on the weight of fresh liver.

The actual active principle of liver has not yet been isolated. Nevertheless, it appears that it resembles certain derivatives of aminoacids, particularly glutamic acid; it may however also be another nitrogeneous base.

The result of the therapy depends principally on the quantity of liver substance that is regularly consumed. No standards have been established. Each sick person requires an amount of liver that must be separately determined. This may be very high, 300, 500, 800 grams and in many cases more than one kilogram of fresh liver may have to be eaten every day. It has been found that it is very difficult to get the sick person to eat so much liver every day, particularly for the reason that one soon tires of a liver diet. Furthermore, the fact that the patient, suffering from this disease, that is pernicious anaemia, has very little appetite also complicates the treatment. In such cases it becomes necessary to alternate administration of the numerous liver preparations that are found on the market to-day with fresh liver. Cases have been described where rectal therapy was the only one possible and good results were thus achieved.

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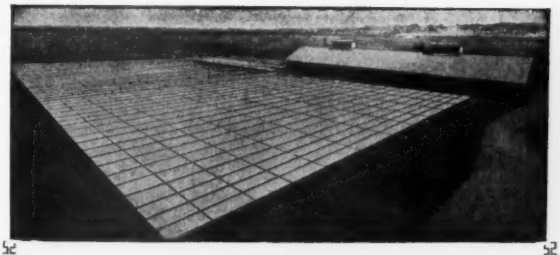

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This therapy is very effective and failures have been noted in only approximately twenty out of 2,000 cases. The therapy is specific, although it is not known just how it affects the mechanism of the sick organism.

Hepatopson is made by the Promonta A. G. It comes in three different forms. In the form of a fluid extract, it corresponds to fresh liver in the ratio of one gram to ten grams. In the form of pills, one gram to one hundred grams of fresh liver. Third, in the form of the aforementioned concentrated preparation, 0.6 gram corresponds to one hundred grams of fresh liver.

Hepatrat is a preparation made by the Nordmark Werke. It is also obtainable in dry and in liquid form. One gram of the extract corresponds to ten grams of fresh liver.

Hepracton is made by Merck. It is a powder of which one gram corresponds to fifty grams of the fresh liver.

Ido-Hepa is a Danish preparation, sold by Ambrosius Luebeck.

There are other liver powders, that is dried livers. Some interesting literature on the subject includes the following:—Minot and Murphy, Journal of the American Medical Association, 1926, volume 87, pages 470ff; Schilling, Deutsche med. Wochenschrift, 1929, number 41; Schulten, Muench. med. Wochenschrift, 1929, pages 121ff; Pulfer, Ther, Gegenw., 1929, pages 294ff; Deutsche med. Wochenschrift, 1929 pages 99ff.

Origanum in France

(*Continued from page 259*)

The pharmaceutical uses of marjoram are numerous. It, at one time, enjoyed a great reputation as resolutive, antispasmodic, antiseptic. Garden marjoram is said, in particular, to have these qualities. Infusions or decoctions are made of the tips, flowered and in leaf, the infusion made from the leaves being recommended for use in relieving coryza, or catarrh.

Vulnerary waters in certain categories, like those coming under the head of arquebus, contain marjoram, in addition to other cultures like the lavender flower, absinthe, basil, hyssop, peppermint, rosemary, thyme, angelica, rue, and so on.

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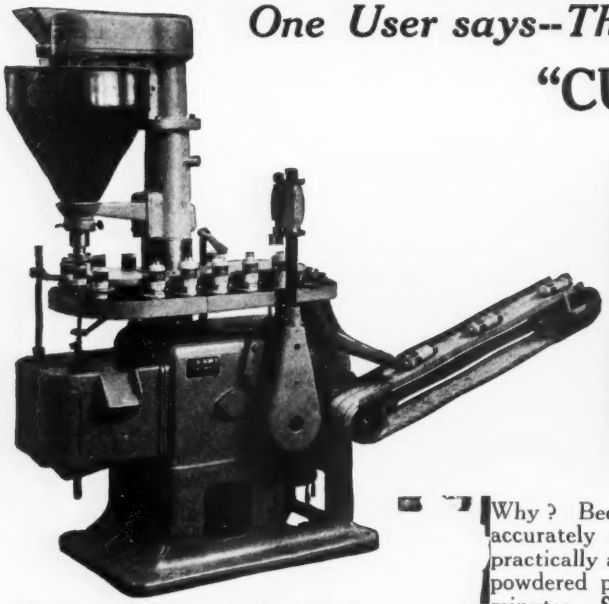

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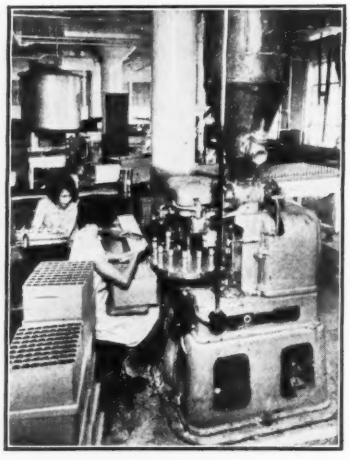

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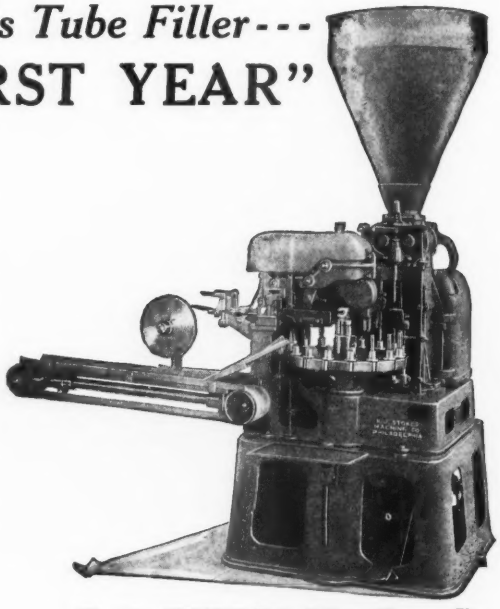

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Write for information on these new Machines or any item in our complete line of Pharmaceutical Equipment.

Tablet Making Machines	☐	Capsule Fillers	☐	Alcohol Recovery Apparatus	☐
Vacuum Pans and Dryers	☐	Oscillating Granulators	☐	Tube and Jar Fillers	☐
Molds of all Types	☐	Coating and Polishing Pans	☐	Bottle Washers	☐
Powder Fillers	☐	Water Stills	☐	Jacketed Kettles	☐
Drying Closets	☐	Drug Mills and Mixers	☐	Conveyors	☐
Percolators	☐	High Vacuum Pumps	☐	Special Machinery.	☐

FJS **FJ STOKES MACHINE COMPANY** FJS

PHARMACEUTICAL MACHINERY SINCE 1895

5932 Tabor Road, Olney P. O. Philadelphia

Preparing Lotions

In this article Mr. Chilson treats the long range of products classed as lotions and extending through cough syrups, liniments, hair tonics, and in fact any product containing solids in suspension.

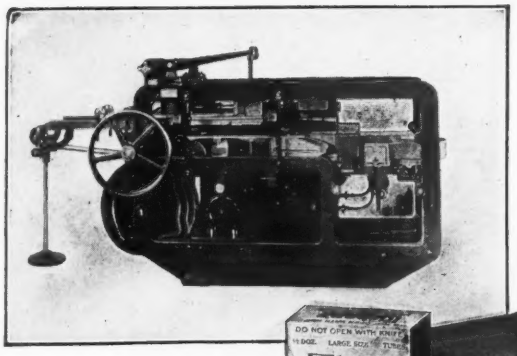
By Francis Chilson

THE first item to be considered in a discussion of the manufacture of various preparations, commonly considered together as "lotions" is undoubtedly water. Water varies in every state in the Union, hence, the manufacturer of any kind of liquid preparation using water must first investigate the nature and purity of the supply in his locality. For the great majority of purposes water must be soft; and for all purposes it must be clean. The usual filtering process to which city water is subjected is not sufficient; it should pass through an additional filter in the plant, for the reason that, while the city water leaving the filtering beds at its source, is free from dirt and harmful bacteria, it nevertheless collects dirt in its progress through water mains and plant piping, which have a tendency to corrode.

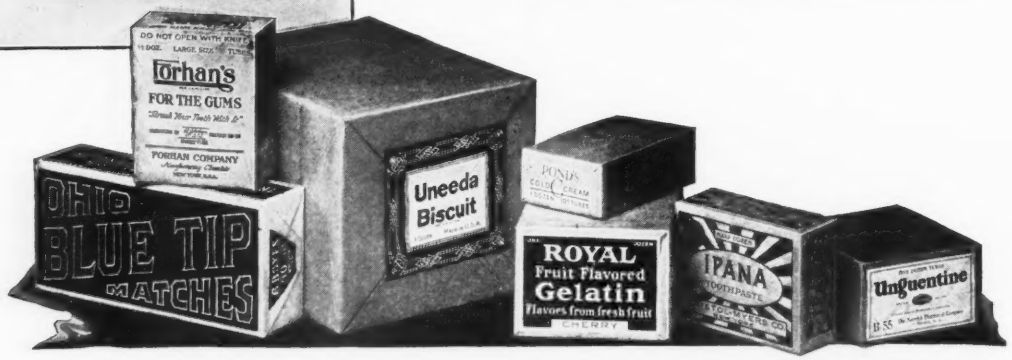
From the manufacturer's point of view the most dangerous impurities in water consist of various mineral salts, which can be eliminated only by distillation. A safe procedure to follow in determining the suitability of the water in a given locality, is to obtain from the local water works an analysis of water. This analysis in addition to giving a detailed account of inorganic matter also gives bacteria counts. The water supply of New York City is exceptionally pure and for most purposes requires only refiltering. If a rule must be given it is this: If you want to avoid all possibility of water troubles, distill what you use. In this way you will eliminate both inorganic and organic matter in the same operation. Of course, this is a question which ought not to be answered out of hand, because the distillation of water, if not necessary, adds considerable expense to factory operations. For the distillation of industrial water there are any number of good stills on the market. The criteria of a good still are its capacity and cost of operation. In any case the determination of water quality is a question for the serious attention of the research laboratory.

Lotions may be classified roughly as emulsions, such as hand lotions; syrups, such as cough medicines; oils, such as some hair tonics; light liquids, such as liniments; liquids containing solids in suspension, such as many powder bases or liquid powders; liquid soaps of all kinds; and effervescent liquids, such as patent medicines of various kinds.

Since each preparation must govern its own manufacture, it is not possible here to touch on that subject other than very superficially. The content of each formula governs to a great extent the manner in which it must be made. For example, emulsions of light viscosity must be made at high speed, and usually are made in kettles or tanks equipped with propellors, which violently agitate the batch. On the other hand, emulsions having a mucilaginous base such as a great many hand lotions, if mixed at high speed will incorporate too much air and upon standing will break down. For preparations containing crystals to be dissolved, speed is an important factor. Batches of this type may be thoroughly mixed in a few minutes; but the mere fact of mixing does not imply, necessarily, that the ingredients are dissolved. When a preparation of this type is mixed too quickly, soluble ingredients tend to settle to the bottom where they remain as a cake. Preparations like liquid soap and hand lotion require very slow mixing and are usually made in kettles equipped with flat horizontal paddles. Sometimes such tanks are equipped with baffles against



Immediate Saving *in Packing Costs*



Large and immediate savings are made by Machine Bundling

The concerns whose products you see illustrated here have adopted machine bundling because of the large savings it makes over packing their goods in boxes.

In most cases there is an *immediate* saving of 60% on material costs alone. That represents the difference in cost between boxes and inexpensive kraft paper. In a year this saving amounts to thousands of dollars.

There is also a saving in labor—the machine with one operator does the work of many hand packers.

These savings pay for the cost of the machine in a few months time.

Shipping charges are also lowered, because the paper wrapper is so much lighter than containers.

Merchandizing Advantages

Machine bundling enables the manufacturer to economically pack dozen and half-dozen lots. In many lines dealers favor these small units.

Equals capacity of two cartoning machines

The bundling machine, working at full capacity, will take care of the output of two cartoning machines. It counts off the right number of cartons, wraps them firmly in heavy paper, and attaches a printed end seal.

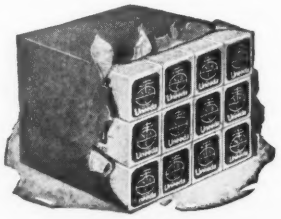
Suitable for Many Products

Here are just a few of the various products being bundled on our machine: tooth-paste, cold cream, matches, gelatin, crackers, cigarettes, Vaseline.

Write for these Cost Surveys

Write for copies of "Certified Surveys" made by the Nielsen Company, Engineers, showing in detail how machine bundling has lowered costs for certain well-known manufacturers.

Package Machinery Company
Springfield, Massachusetts
New York Chicago Los Angeles
London: Baker Perkins, Ltd.



The packages may be bundled in dozen or half-dozen lots

which the rotating wave breaks very gently. Preparations containing solids in suspension—as colloidal clay in liquid powders—should be mixed at moderate speed in kettles equipped with narrow paddles. The reason for this lies in the tendency of heavy materials to pile up before the mixing device, causing dams which may burn out the driving motor. Here again the nature of the formula plays an important part. Some preparations of this type require rapid agitation. The damming of the solids in this case is avoided by adding such solids very slowly while the batch is being agitated. Cooked materials usually require slow agitation and mixing time and temperature must be controlled. When these materials have a tendency to stick, a rotating scraper is mounted in the kettle and adjusted to pass very close to its sides. Within this scraper, rotating in the opposite direction, is mounted a flat paddle agitator. Effervescent preparations are usually solutions of crystalline substances, like aluminum chloride or citrate of magnesia to quote two very common examples. Such preparations are usually made in two parts; one consisting of the batch base; the other the effervescent material, which is allowed to dissolve very slowly. The two elements are then brought together and slowly agitated, usually with hand paddles or low geared stirrers of the paddle type.

Some preparations of a yellowish cast may be whitened by the inclusion of a slight amount of air. The amount of air incorporated in a batch is governed by the violence of agitation and by the distance traveled out of the material by the mixing device. For this reason materials being agitated while running into a filling machine will sometimes change color. As the batch gets lower the violence of the agitation increases. Where practicable all mixing kettles, tanks or portable mixers should have two or three speed starting boxes. With these it is possible to change the rate of agitation at various stages in the manufacture of the batch.

Filtering is an important process in the manufacture of lotions. The viscosity of the preparation determines the kind of filter required. High viscosity materials may be filtered by means of a filter press (usually resorted to when the filter cake has a value) or more commonly by suction. Suction filters are equipped in various ways, some have filter pads of thick felt and filter paper combined, others use paper and a loose material such as asbestos wool, fullers earth, colloidal clay, etc. Light liquids such as eye lotions, linaments, skin lotions may be "polished" by filtration through asbestos wool, fine sand and some forms of clay.

Other forms of filters are the ceramic—a gravity filter in which the liquid passes through porous tile, and the old fashioned gravity filter rack in which the material is allowed to filter at its own rate of speed. Such filters however, while cheap are not economical because of evaporation caused by exposure and also because of extreme slowness, varying as the weather, particularly on syrupy or slightly viscous liquids.

Preparations containing talc, zinc oxide, colloidal clay, etc. obviously cannot be filtered, but freedom from specks of dirt, which show up badly when bottled, may be eliminated by washing the solids beforehand, and straining then through fine muslin.

Filling lotions presents no serious problems. Care must be taken that they do not contain materials which would attack the filling equipment. Contamination can be avoided by cleaning the filling machines with suitable solvents. Vacuum fillers are equipped usually with rubber tubing to permit adjustment of the machines to various sizes. These tubes are easy to remove; it is advisable, therefore, to keep separate sets for materials difficult to clean out by ordinary methods. It is not possible here to discuss the various merits of vacuum and mechanical fillers without getting into controversial territory.

Corking if done by hand may be made easier by moistening the corks with water or a mixture of water and glycerine, depending on the nature of the preparation.

Capping, if required, labelling and cartoning need no comment other than that already made in the discussion of filling creams.

Clorox Chemical Co. for the year ended June 30, report net income after depreciation, Federal taxes and other charges, of $380,356, equal to $3.28 a share on the combined Class A and Class B stocks, exclusive of 2,230 shares of Class A stock issued as a dividend on July 30, compared with $463,146, or $4.07 a share, on the combined stock in preceding fiscal year.

Parke, Davis & Co. has declared a special dividend of 10 cents per share and the regular quarterly dividend of 25 cents per share, both payable September 30 to holders of record September 19. An extra dividend of 10 cents a share was also paid three and six months ago.

The Llewellyn Laboratories, Inc., the Schettler Drug Co., of Detroit, and the Miller Drug Co. of Cleveland, have completed arrangements to combine their buying power and laboratory facilities, it was announced.

Although each company will maintain its separate identity, the new association, with aggregate sales of $3,000,000 annually, will have lower operating costs.

Frank Thomas Faxon, vice-president of the McKesson-Faxon Drug Co., Kansas City, died in his home there, August 30. He was in his fifty-sixth year.

Mr. Faxon went to work with Woodward, Faxon & Co., in September 1894. In 1907, he became manager of the sundries department of Faxon & Callagher (the successor house), and a year later was made assistant secretary of the company. Five years later he became secretary of the succeeding Faxon & Gallagher Drug Co., and he was made vice-president in 1923. When the company was reorganized as a unit of the McKesson & Robbins group, he continued as vice-president.

Mr. Faxon was also a director of the Druggists Supply Corp., N. Y., and chairman of its merchandise committee.

No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.

Detroit, Michigan

Belt Conveyors and Packaging Tables

Avoid congestion, confusion, useless handling of packages in your finishing department.

Belt conveyors will stop this waste!

They keep production moving and enable fewer people to do more work.

Write for catalog of Kiefer Conveyors, made especially for this purpose.

The Karl Kiefer Machine Co.,

CINCINNATI, O.

Review of Patents

(*Continued from page 252*)

alkali or alkali earth metal iodides may be used in the presence of sulphuric acid. Union Chimique Belge Societe Anonyme, Brussels, Belgium. B. P. No. 329,888, filed July 5, 1929.

GERMAN PATENTS

Combination Compact

The invention is concerned with a combination of powder with paint (face). Up to the present time the application of face paint or rouge and powder has had to be carried out from separate containers, the powder and the rouge being used separately, with the result that results obtained have not been natural. The invention consists of the inclusion within the powder paper or powder stone or cake of a piece of dry rouge. J. Heinze, Dresden, Germany. G. P. No. 503,757, filed September 30, 1928.

Inactive Menthol

The process is concerned with the preparation of inactive menthol, the racemic form of natural menthol, from the mixture of methols which is obtained by the hydrogenation of thymol with suitable catalysts. By treating the thymol twice with hydrogen under pressure and with the use of nickel oxide as catalyst, an inactive menthol is obtained. This menthol has a melting point of 9° C. and a congelation point of minus 10° C.

The racemic form of menthol, possessing a higher melting point, is separated from the menthol mixture, obtained by the hydrogenation of thymol, by freezing and centrifuging. The inactive menthol has both the taste and the odor of natural menthol. The hydrogenation product of thymol is separated into the aforementioned racemic form and liquid isomeric menthol mixture in the given manner. The latter is then converted into the corresponding ketone by means of dehydrogenating catalysts, such as copper oxide, nickel oxide, etc. The ketone is then converted into the menthol mixture by treatment with hydrogen under pressure and with the use of hydrogenating catalysts. The inactive form of menthol is then obtained in the usual manner.

Thus 25 kilograms of thymol are treated in an autoclave at approximately 200° C. with hydrogen under five to thirty atmospheres pressure in the presence of 500 grams of nickel catalyst. is separated from the mass by filtering or distilling the latter. The inactive menthol is separated as above. The twenty-five kilograms of thymol yield fifteen kilograms of inactive menthol and ten kilograms of liquid isomeric menthol mixture. The latter is treated with 200 grams of copper oxide, preferably with the addition of alkali, at a temperature of about 200° C., until the evolution of hydrogen stops and the liquidisomeric menthol mixture is completely converted into the corresponding ketone. The ketone is then treated as above with hydrogen under pressure. Rheinische Kampfer-Fabrik G. m. b.H., Duesseldorf-Oberkassel, Germany. G. P. No. 489,819 filed November 24, 1921.

Chemicolloid Laboratories, Inc., 44 Whitehall st., New York, have just issued a new illustrated catalog, a copy of which may be obtained by writing them. The Rotor and Stator of the Charlotte Mill manufactured by this firm are of a grooved design and due to the fact the Charlotte Colloid Mill does not depend entirely upon the force of hydraulic shear for its action. There are set up within these grooves, whirling currents of the material and, due to this eddy action, the products being processed are subject to a terrific beating and chopping action. Since the Charlotte Mill employs both the forces of hydraulic shear and impact action, the product being manufactured is of exceptionally fine quality.

The catalog is also descriptive of the general construction of the mill as well as giving in detail the various wide range of uses to which such a mill is adapted.

BETTER PRODUCTS
. . easier to use

HERE are just a few of the many products that are Kork-N-Sealed.

More and more manufacturers are turning to this newer, better method—for its advantages are obvious.

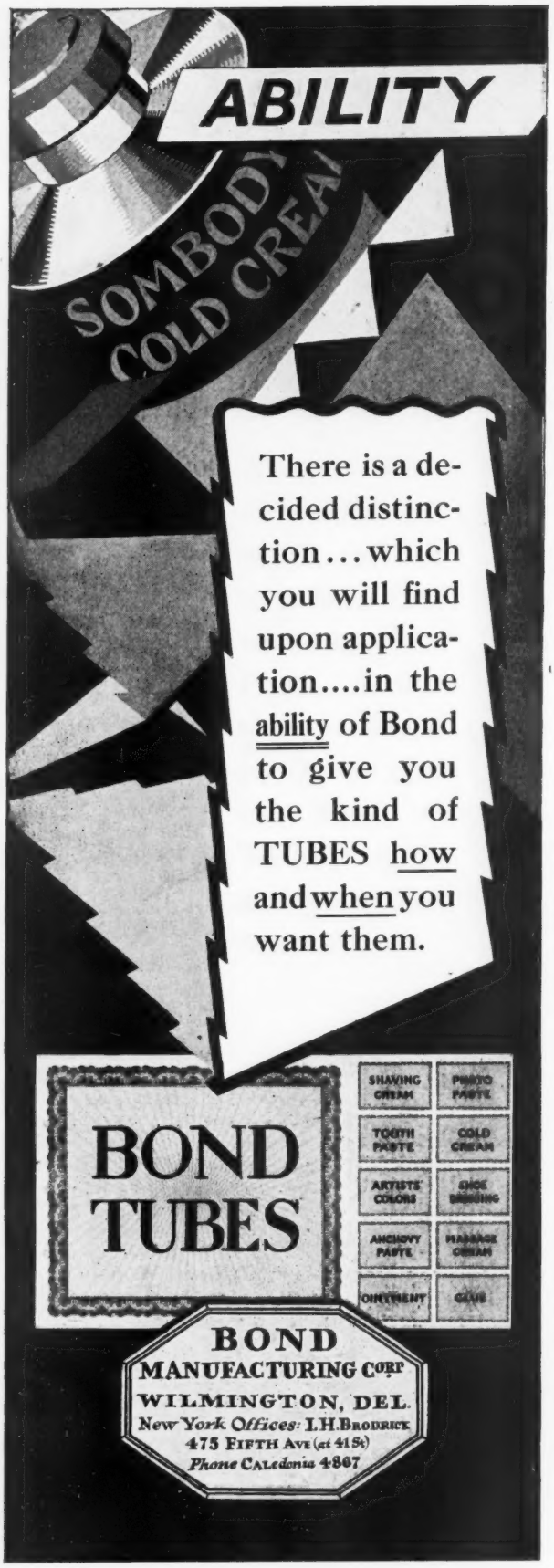
Consumers appreciate immensely the added *convenience*. A positive, airtight seal or reseal that opens with a flip of the finger! Fresh-bottled goodness until the very last drop is gone!

Then, retailers *see* the big impression Kork-N-Seal makes on their trade. And the selling job of the wholesaler and jobber salesmen is just that much easier.

Naturally that means easier selling for the manufacturer's salesmen, too. And in tight competition—Kork-N-Seal in itself is an undeniably important sales help.

Why not investigate for yourself the advantages of Kork-N-Seal for *your* products. Just let us send complete laboratory reports and sales data and then judge for yourself. A letter will not obligate you in any way. Write to-day to headquarters — Williams Sealing Corporation, Decatur, Illinois.

Williams
KORK-N-SEAL
THE CAP WITH THE LITTLE LEVER



Closures for Glass

(*Continued from page 236*)

is illustrated in Figure 7. This consists of an ordinary R O seal, which has already been discussed, but attached to it is a metal skirt with two flaps which can be covered by the label or any other means to prevent interference with the seal without visible evidence.

There are one or two specially constructed caps which are good examples of how caps can be adapted to meet various needs. A familiar one is that used for paste bottles. It is the usual screw cap with a raised hood in the center which permits the brush to remain in the jar after sealing. Another is the one which includes a rubber bulb and medicine dropper as part of the closure. Cork stoppers and Durez or Bakelite caps sometimes have brushes inserted at the base thereby using the closure as a handle. Examples of special closures are shown in figure 8.

Another type of all-glass containers is the bottle used for salts, chemicals, etc., which has a glass stopper the base of which is ground to the inside surface of the neck of the bottle. With a slight pressure this stopper becomes firmly fixed. A knob at the top of the stopper facilitates removal.

Philadelphia Fellows

Through the co-operation of Eli Lilly & Co., Indianapolis, the Philadelphia College offers a new graduate fellowship in pharmaceutical research for the college year 1930-31. The fellowship carries with it a compensation of $750 and free tuition. The candidate will devote himself to a study of enteric coatings for tablets and capsules.

During the past year, Milton Wruble, chemical engineering graduate from the University of Michigan, received his Master of Science degree from the Philadelphia College for original research in the field of enteric coatings for tablets. The purpose of the fellowship is to develop further the fundamental findings of Milton Wruble.

Candidates for the fellowship must hold at least the degree of Bachelor of Science in pharmacy, chemistry or related subjects to be eligible for consideration. Opportunity is afforded the holder of the fellowship to enroll for graduate courses leading to the degrees of Master of Science and Doctor of Pharmacy.

Ruth E. Miller who received from the Philadelphia College of Pharmacy and Science a degree of Master of Science in Bacteriology in June, 1930, has been named to continue the research under the auspices of the Chilean Government in the pharmacy of iodine.

During the past year, Linwood Tice, Philadelphia College graduate in pharmacy in 1929, has held this fellowship, assisted in the bacteriology phases of the research by Miss Miller. Tice has just been appointed to the chair of Professor of Theoretical and Operative Pharmacy in Baylor University, Dallas, Texas.

The research this year will be conducted under Miss Miller's direction almost entirely in the field of bacteriology.

P. R. Dreyer, Inc., New York, announce that Dr. F. A. Kertess is now covering the Metropolitan territory on essential oils and aromatic chemicals.

Alcohol Regulations

(*Continued from page 238*)

waiting ten days, he is subject to the same questioning and scrutiny every ninety days that he is subjected to when he obtains his first permit. He must show orders against which his alcohol is to apply, and if he loses any of these orders through cancellation, he must notify the department so that the amount of permit gallonage can be reduced.

An interesting viewpoint was expressed by a prominent member of the drug trade who said:

"It appears to me that unless a very stiff fight is made, drug trade manufacturers are bound to lose in any effort to bring the regulations back to where they were before the passage of the Williamson bill. The new regulations have been made so severe that the department probably thinks that the drug trade can not possibly center a proper fight on all of them. And if the trade is to pick out only the most objectionable features and have them eliminated, the department will then have most of its changes left in the regulations. But the manufacturers should band together and fight these regulations tooth and nail. They should, in the same manner as the department has done, go the limit and ask for elimination of every point to which they have the slightest objection. The days of meek submission to any regulations designed to improve prohibition enforcement conditions are past. Industrial alcohol diversion is one of the smallest matters that the department has to think about, and the sooner the department realizes that manufacturers using alcohol will not supply the department with all the evidences of its activity to enforce the law, the better it will be for the drug trade."

McDonald Engineering Corp., 220 Varet st., Brooklyn, N. Y., announce the opening of two new western offices. The new Los Angeles offices are located at 443 South San Pedro st., and is in charge of Frederick Todt. An office has also been opened at 1112 Merchandise Mart, Chicago, and is in charge of Waldo E. Joyce.

Mr. Bacher, of McDonald Engineering Corp. has stated that an increase of business in the western territory, together with the advancing policy of the company, has necessitated these new facilities.

The Harshaw Chemical Co. announces the opening of its Pittsburgh offices with Howard L. Haney, Sales Manager, in charge. Offices are located in the Terminal Office Building, Carson St. and Terminal Way, S. S., Pittsburgh, Pa. Offices have also been opened in Cincinnati with Wm. A. Bauman, Sales Manager in charge. The Cincinnati offices are located at 123 East 6th st.

Abbott Laboratories, at a meeting of the Board of Directors, held August 21, declared the regular quarterly dividend of 62½c payable October 1st to stockholders of September 18th.

Plans were approved for the completion of new buildings to afford additional facilities for increased business.

A NEW AND BETTER CLOSURE!

"FILMASEAL"

(Trade Mark Registered)

Filmaseal deposits a transparent film across the top of the container to which it tightly adheres.
This film must be torn off or ruptured to reach contents.
Our standard continuous thread screw caps are made to include the Filmaseal and make a double seal for your protection.
The application of Filmaseals is automatic and intended for large scale production.
If your product is affected by air—if it is subject to leakage —evaporation—or deterioration—send us a sample to Filmaseal for your consideration.

Bottle Closure Specialists Since 1890

FERDINAND GUTMANN & CO.

Bush Terminal No. 19 BROOKLYN, N. Y.

Metal Screw Caps

Saniseal Metal Milk Caps *Distilled Water Caps*
Crown Corks *Special Purpose Caps*

Patents pending covering FILMASEAL and Every Phase of Its Application and Use.

"Scientific"

ULTRA FINE DISK FILTER

—

Furnished with Pump

—

Easiest to Operate

—

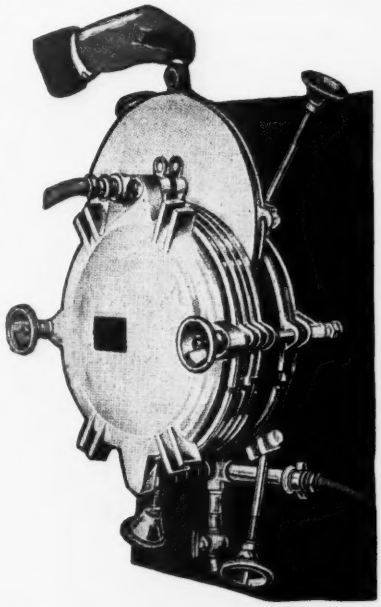
Best in Results

—

Vacuum Bottle Filling Machines

—

Electric Mixers



For pepsin preparations, tinctures, essences, extracts, syrups, etc.

Gravity and Pressure Filters for Every Purpose

SCIENTIFIC FILTER CO.

1 Franklin Sq., N. Y. C.

AN ADHESIVE FOR EVERY MACHINE OR HAND OPERATION

Those Tough Cartons

Many manufacturers of corrugated and fibre containers are lining their cases with tougher kraft papers, which make the sealing operation quite difficult.

MIKAH

CASE SEALING GLUE

(NA 6244)

has been developed for these containers. Operates perfectly either by machine or by hand, not only on special stocks but also on regular grades.

A trial barrel will be sent on approval.

NATIONAL ADHESIVES CORPORATION

Executive Offices: NEW YORK

WORLD'S LARGEST PRODUCER OF ADHESIVES

P. C. Doyle Joins Gutmann

Ferdinand Gutmann & Co., have announced that P. C. Doyle has joined them in their Filmaseal sales division. Mr. Doyle was formerly vice-president and sales manager of the American Metal Cap Co. He was also a member of the board of directors of the Glass Container Association and chairman of the standardization committee for a number of years and particularly active in all of the simplification work carried on in the U. S. Chamber of Commerce.

Ungerer & Co., New York, has appointed R. L. Nichols as its sales representative in the Southern territory, effective September 1, for its complete line of essential oils, perfumery and flavoring raw materials. Mr. Nichols is making his headquarters at Atlanta and will make regular trips through the states of Georgia, Alabama, Mississippi, Texas, Arkansas and Louisiana. He is well acquainted with the trade in that territory, having covered it for the past several years with a similar line of products.

Container Corporation of America, announced the purchase of assets and business of the Gibraltar Corrugated Paper Co., Inc., with plant at North Bergen, N. J. The acquisition provides Container for the first time with owned manufacturing facilities to serve the New York metropolitan area, the Gibraltar plant being located within one-half hour's trucking distance of the mid-Manhattan area. The transaction was consummated through an exchange of Container preferred stock and a cash consideration.

Selling Drugs in Chile

(*Continued from page 240*)

The usual method of trading is either by the establishment of branch offices—with the added possibility of manufacturing the product in Chile—or opening of agencies supervised by Americans.

Secondary methods are the securing of a satisfactory Chilean firm to act as representative, or the services of some British, French or other European firm to handle American goods that do not compete with their own products.

The necessity for close co-operation with the local druggists—both wholesale and retail—is as important here as in other South American countries, and the agent must, of course, carefully watch for infringements of trade-marks—which is very prolific—and other matters of like nature.

In merchandising in Chile, great dependence is placed upon personal friendships, and a fixed price plan is difficult to adhere to, except in staple lines which are highly competitive.

Most of the local advertising of drug products is done, either through the newspapers, or illustrated journals. Street car advertising is used to a considerable extent in popularizing new products and has proved very successful, in bringing perfumes, toilet articles and drug products to the attention of the people. Distribution of samples is very widely resorted to in Chile, and has probably done more to extend the sale of drug products than any other advertising method.

The GARB *of the* GREAT

THERE stands the Queen! Her Royal Highness! She has a position to uphold. She must look the part. Hence, the beauty, the brilliance, the splendor of her costume!

¶ Your product, too, must look the part if it is to rank high in the public eye. Clothe it in color—pack it in a beautiful Maryland Blue Bottle.

¶ These distinctive containers are unequalled for lifting bottled products out of the commonplace and increasing their sales appeal. ¶ You will be interested in the sales suggestions on the back of this page.

MARYLAND BLUE BOTTLES

"Color Salesmen" for Your Products

COLOR is a master salesman. Silently but surely it works, glorifying the product on display, attracting the attention of customers, arousing the desire to possess! Actual tests have proved that vivid color is a vital factor in moving merchandising from dealers' shelves.

As "color salesmen" for products packed in glass, Maryland Blue Bottles are unsurpassed. These attractive containers always stand out on display because of their vivid and distinctive shade of blue. That is why they are used by manufacturers of many of the most successful products on the market.

We also make high quality green tint and flint bottles.

Let us send you samples of Maryland Blue Bottles or jars so you may see for yourself how they will improve the merchandising of your products. We make them in a wide variety of popular shapes and capacities for products sold in several sizes. Or we shall be glad to supply you with bottles designed to meet your individual requirements.

Modern equipment, skilled workmen and high grade materials are your assurance that all Maryland Bottles are of uniform quality, accurate capacity and dependable strength. Write us today for samples. . . . . .

MARYLAND GLASS CORPORATION

BALTIMORE (M) MARYLAND

MARYLAND BLUE • GREEN TINT • FLINT BOTTLES

New York Representative: 270 BROADWAY *Pacific Coast Representative:* PACIFIC COAST GLASS CO., SAN FRANCISCO, CAL.

Of course all advertising matter, and literature, must be in Spanish, and directions on labels should be in this language as well as in English. The metric system of weights and measures is the only legal standard, but sometimes English weights and measures are used in local commerce.

Vital factors in securing Chilean trade, which careful investigation will bring out are:

First: Prompt delivery of goods. With increases in German shipping, German firms are now able to make deliveries equally as quickly as we can do. It is important that the American exporter should use every effort to deliver goods promptly. In the case of small packages, airmail should be considered. When goods are urgently needed, price does not figure in the deal, and our advantage lies in our constant contact by air.

A second vital factor is quotation of prices CIF. Chilean port. The British, German, Swedish and Japanese all quote CIF. prices ,while, as a rule, we are more inclined to make our prices F. O. B. American factory, or United States port, which involves the Chilean in considerable figuring before he can compare prices. The Chilean merchant will always give preference to the manufacturer—or exporter—who quotes an all inclusive price, as it makes it possible for him to estimate the exact cost at his warehouse.

The careful packing and wrapping of drug products is of the utmost importance, so that they may be protected in transit from the action of heat and damp in the tropics, breakages in loading and unloading, etc. Some firms include the packing—tin-lined cases, strapping,—banking charges, consular documents etc.—in their CIF. quotation. When quoting CIF. it should be made clear whether these items are included, or not.

Another advantage which European merchants seem to hold in the Chilean trade, is adjustments in insurance cases. Most of the British, German and European companies have their agents in the country, and make adjustments in from 30 to 60 days. In the case of the United States exporters, such adjustments may take from six months to a year.

Chile, being one of the countries which has excellent parcel post connections with the United States, as well as arrangements whereby parcels can be sent C. O. D., manufacturers have a particularly favorable opportunity of testing out the possibilities of mail order business abroad.

Remember that the Chilean is up-to-date in thought, interested in everything modern, a keen business man and known generally as the "Yankee of South America." Chile's people are wealthy, educated, enlightened. Its school system, is as fine as any in Latin America. Its hospitals modern and excellently equipped, housed in buildings in which even our communities would take a commendable pride.

HOPKINS' ANALYZED
Crude Drugs
The Earth Contributes and J.L.HOPKINS&CO. DISTRIBUTE ANALYZED CRUDE DRUGS.
Tested BOTANICALLY
Tested MICROSCOPICALLY
Are you having trouble with your soap?
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Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Ammonium Valerate

Chemicals

Monthly Review

Alcohol Firms Somewhat

Alcohol is considerably firmer in the spot market. Competition, which had been very keen all Summer resulting in a condition bordering on chaos, now seems to be well under control. Distillers are again working in co-operation with each other and this has added material strength to the market. As the large consuming season for alcohol is nearing it does not seem likely that a break among the distillers will occur so that a firm market should continue during the Fall and Winter months.

Italian Quinine and Iodine

Italy has recently succeeded in developing sources for iodine, quinine, and bromine. The Regie Terme di Salsomaggiore is extracting iodine from the brine waters of the mineral springs at Salsomaggiore, which is successful should make the country independent of imported iodine. A plant has been erected, which the promoters claim is producing one quintal of pure iodine per day, with a capacity of double that amount. The import duty on iodine has been increased 100-fold to protect the young industry, and a consortium has been formed for the development of the industry which includes the Italian Government and two of the strongest Italian manufacturers of fine chemicals.

The Government has acquired cinchona plantations in Java and made arrangements to receive the necessary supplies of cinchona bark.

During 1929, the Soc. Italiana del Bromo completed its plants for the extraction of bromine from the salt pans at Margherita di Savoia near Foggia, and reached an initial production of 20 tons of bromine annually. This amount is more than sufficient to cover domestic needs. Protection was afforded the young industry in the form of a 60-fold increase in the import duty on bromine and a 150 per cent. increase on bromides. (Trade Commissioner E. Humes, Rome.)

Mercury Unchanged

Mercury presents a strong undertone with quotations prevailing at levels established a month ago. Production at this time is declared to be about equal to consumption with stocks in warehouses considered as conservative. Competition to sell has to a large extent disappeared from this market. The price of domestic metal is still considerably below that of the imported material and is therefore in control of this market.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Acetanilid, USP, 200 lb bbls..lb	.36	.37	.37	.36	.37	.36
Acetone, pure 350 lb drs wks..	.12	.14	.14½	.12	.19	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30	1.30	1.25	1.35	1.25
ACID, Acetylsalicylic, 225 lb .....bbls.	.85	.90	.90	.85	.90	.85
Agaric, 1 oz vials .....oz	...	3.50	3.50	3.50	3.50	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18	.18	.18	.18	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61	.61	.60	.61	.60
Boric, 300 lb bbls.....lb.	.09½	.10	.10	.07½	.10½	.07½
Cacodylic, 5 lb. bot.....lb.	...	8.00	8.00	8.00	8.00	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82	4.82	4.82	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18	.18	.14	.19	.14
Cinnamic, 5 lb cans.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Citric, USP, crys 230 lb bbl .....lb.	...	.46	.46	.46	.46	.46
USP, crys imp. 112 lb keg .....lb.	.65	.70	.70	.65	.61	.59
USP, powd 200 lb bbl...lb.	...	.47	.47	.47	.47	.47
Diethylbarbituric, 1 lb bot lb.	4.00	4.50	4.50	3.80	4.60	4.60
Gallic, USP, 150 lb bbls..lb.	...	.74	.74	.74	.74	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75	1.75	1.40	1.75	1.40
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.70	.70	.70	.80	.80
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55	.55	.55	.55	.55
Hypophosphorous, USP, 30% .....lb. 5 gal demis.....lb.	...	.85	.85	.85	.85	.85
Lactic, USP, VIII 100 lb cbys lb.....	.53	.59	.62	.53	.62	.56
USP, X 100 lb cbys.....lb.	.57	.59	.64	.57	.64	.62
Phenylcinchonic.....lb.	...	3.25	3.25	3.25	4.50	4.50
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15	.15	.14	.15	.14
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40	1.40	1.30	1.50	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70	1.85	1.80	1.85	1.80
Salicylic, USP, 100 lb bbls.lb.	.40	.45	.45	.40	.40	.39
Succinic, 100 lb bbls.....lb.	...	1.35	1.35	1.35	1.35	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06	.06	.05	.06	.05
Tannic, USP, fluffy 50 lb bbls. .....lb.	.90	.93	.93	.82	.93	.85
Powd 200 lb bbls.....lb.	.80	.85	.85	.80	.85	.80
Tartaric, USP, 300 lb bbls.lb	.35	.36	.38½	.35	.38	.37½
Aconitine, Alk, crys 1 oz vials .....oz.	...	30.00	30.00	30.00	30.00	30.00
Amorphous, 1 oz vials....oz.	...	20.00	20.00	20.00	20.00	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.14½	.15	.16	.14½	.16	.15
Anhydrous, 350 lb bbls....lb.	.15	.16	.18	.16	.18	.16
Agaricin, 1 oz vis incl.....oz.	...	2.32	2.32	2.32	2.32	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.25	1.35	1.35	1.25	1.35	1.25
Ethyl, USP, 190 pf 50 gal bbls.....gal.	2.69½	2.79½	2.79½	2.69½	2.79½	2.69½
Pure tax free.....gal.	.61	.69	.69	.61	.69	.61
Grain drums.....gal.	2.69	2.79	2.79	2.69	2.79	2.69
Denatured, drums add 7c for bbls.....						
No. 1 spec.....gal.	.42	.46	.59	.42	.60	.47
1 comp.....gal.	.43	.47	.60	.43	.61	.48
No. 5 comp.....gal.	.42	.46	.59	.42	.60	.47
23 a, spec.....gal.	.43	.55	.59½	.43	.61½	.48½
39 b, spec.....gal.	.51½	.61½	.63½	.51½	.71	.51½
40 m, spec.....gal.	.47	.58	.59	.47	.66½	.47
Isopropyl refd 98-99% drs .....gal.	1.30	1.60	1.60	1.25	1.50	1.25
Phenylethyl, 1 lb bot.....lb.	4.30	4.50	4.50	4.30	10.00	8.00
Aloin, USP, 100 lb cases....lb.	1.73	1.78	1.95	1.73	1.95	1.25
Aluminum Acetotartrate kegs .....lb.	...	1.60	1.60	1.60	1.60	1.60
Amidipyrine, 10 lb boxes....lb.	4.25	4.45	4.45	4.25	4.45	4.25
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40	.40	.38	.40	.30
Benzoate, USP, 1 lb bot...lb.	...	1.27	1.27	1.27	1.27	1.27
Borate, 10 lb bot.....lb.	...	.35	.35	.35	.35	.35
Bromide, USP, 450 lb bbls.lb.	.47	.49	.49	.47	.50	.47
Imported, 112 lb boxes..lb.	.48	.50	.50	.48	.50	.48
Carb, USP, lump 100 lb kegs .....lb.	...	.13½	.13½	.13½	.13½	.13½
USP, powd 100 lb kegs..lb.	...	.14½	.14½	.14½	.14½	.14½
Citrate, 100 lb kegs.....lb.	.90	1.30	1.30	.85	.90	.85
Ichthyolate, as to brand..lb.	4.00	4.50	4.50	4.00	4.50	4.00
Iodide, USP, 25 lb jars...lb.	...	5.20	5.20	5.20	5.20	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50	.50	.48	.50	.43
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20	1.20	1.15	1.20	1.15
Valerate, USP, 25 lb jars...lb.	2.75	2.90	2.90	2.75	2.90	2.75

{ *Monthly Review* }

Bismuth Still Easy

Bismuth metal and salts continue on the easy side as supplies are ample and evidently well in advance of consuming requirements. Business during the past month has been less active as requirements in the consuming field seem to be less. As production of the metal has been well above needs there is very little likelihood that strength in this commodity will develop until such time as production and consumption are more nearly on a parity.

Glycerine Offered Lower

Glycerine is lower on spot being offered at 13c per lb. for C. P. This is principally due to the fact that some western producers have accepted business at lower prices and buying is still in a small way. The outlook for the future, however, is reported as encouraging. Stocks in the hands of consumers are not large and a general replacement is now about due. Any indication of concerted buying for replacement should have the effect of strengthening the market undertone considerably. However, as stocks in the hands of producers are considered large, it seems unlikely that increase in demand will materially increase the price but a firmer undertone is sure to develop.

Japanese Exports to U. S.

The following is a statement of quantities and values of drugs and chemicals exported to the United States from Japan Proper during the years 1928 and 1929:

	Unit of Quality	*1928*		*1929*	
		Quantity	*Value*	*Quantity*	*Value*
Camphor-crude	lbs.	1,195,073	399,923	1,955,264	$691,925
Camphor-refined	"	1,372,266	669,889	1,364,130	784,431
Pyrethrum flowers	"	12,504,786	3,543,029	9,936,126	1,913,129
Vegetable wax	"	2,515,208	380,790	2,313,338	463,614
Agar Agar	"	376,475	274,539	501,234	401,749
Quinine sulphate	ozs.	461,000	170,990	205,000	75,856
Quinine alkaloid	"	5,000	2,377	5,000	2,210
Menthol	lbs.	192,690	710,515	390,520	1,135,307

(Assistant Trade Commissioner H. B. Titus, Tokyo, from information furnished by the American Consulate General, Tokyo.)

In addition to the domestic industry there are a number of important foreign companies that have established laboratories in Brazil for the manufacture of the more important of their products, to avoid high import duties.

The "Usines Chimiques du Rhone," a French concern, has a large factory in the State of Sao Paulo, known as the "Cia. Chimica Rhodea Brazileira," and the German I. G. manufactures aspirin and other products in Rio de Janeiro, under the name of the local company "A Chimica Industrial Bayer—Meister Lucius." (Consul S. R. Thompson, Rio de Janeiro.)

Cod Liver Oil Steady

Cod liver oil remains unchanged in price, quotations remaining at levels established during the past month. It is now apparent that leading sellers have covered their requirements in the primary market. Good prices were obtained considering the fact that production of oil was considerably below last year. With the active season for cod liver oil just ahead movement to buyers for distribution has shown improvement.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Amylene Hydrate, 1 lb bot..lb.	...	7.10	7.10	7.10	7.10
Antipyrine, USP, 100 lb cans.lb.	2.25	3.00	2.25	3.00	1.53
Apomorphine Hydrochloride, ¼ oz. vials.....oz.	22.60	22.70	22.60	22.70	22.60
Arecoline Hydrobrom, 1 oz vials .....oz.	7.75	8.75	7.75	8.75	7.75
Aspidospermine Amorphous..oz.	...	15.00	15.00	15.00	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	6.50	7.00	9.10	6.50	9.10	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00	25.00	25.00	25.00	25.00
Sulfate, 5 oz cans.....oz.	...	2.50	3.00	2.50	3.00	3.00
Single ounce.....oz.	...	3.00	3.15	3.00	3.15	3.15
Barium Iodide, 5 lb box.....lb.	...	5.15	5.15	5.15	5.15	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10	.10	.09½	.10	.09½
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80	.90	.75	.90	.85
Domestic syn. 50 gal bbl..gal.	.70	.75	.75	.70	.75	.70
St. Thomas, 50 gal bbls...gal.	.80	.90	.90	.80	.90	.80
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60	2.60	2.50	2.60	2.50
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05	1.05	1.00	1.00	1.00
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40	1.40	1.20	1.40	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35	.35	.30	.35	.30
Formate, 1 lb bot.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Succinate, 160 lb cby.....lb.	...	5.25	5.25	5.25	5.25	5.25
BISMUTH, metal 100 lb cases .....lb.	...	1.10	1.70	1.10	1.70	1.70
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.25	5.50	3.25	5.50	5.50
Betanaphtholate, 5 lb box.lb.	...	2.90	3.10	2.90	3.10	3.10
Citrate, USP, 5 lb cans....lb.	...	2.60	2.75	2.60	2.75	2.75
Chloride.....lb.	...	3.00	3.15	3.00	3.15	3.15
Hydroxide.....lb.	...	2.90	3.05	2.90	3.05	3.05
Nitrate, 25 lb jars.....lb.	...	1.25	1.80	1.25	1.80	1.80
Oxide anhydrous.....lb.	...	3.25	3.40	3.25	3.40	3.40
Oxychloride, 25 lb boxes...lb.	...	2.95	3.10	2.95	3.10	3.10
Salicylate, 25 lb boxes....lb.	...	1.65	1.80	1.65	1.80	1.80
Subcarbonate, USP, 25 lb boxes.....lb.	1.70	1.75	2.20	1.70	2.20	2.20
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.65	2.72	3.45	2.65	3.45	3.45
Subgallate, USP, 25 lb boxes .....lb.	1.75	1.80	2.50	1.75	2.50	2.50
Subiodide, 5 lb lots.....lb.	...	4.10	4.25	4.10	4.25	4.25
Subnitrate, USP, 25 lb jar..lb.	1.35	1.40	1.60	1.35	1.65	1.58
Subsalicylate, USP, 25 lb boxes.....lb.	2.55	2.60	2.90	2.55	2.90	2.90
Tannate.....lb.	...	2.30	2.65	2.30	2.65	2.65
Borax, crys USP, 400 lb bbls..lb.	...	.06	.06	.06	.06	.03½
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90	1.90	1.65	1.90	1.65
Butylchloral Hydrate bot....lb.	4.00	5.00	5.00	4.00	5.00	4.00
Cadmium iodide, 10 lb bot...lb.	...	4.55	4.55	4.55	4.55	4.45
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.45	2.50	2.80	2.75	2.95	2.45
Citrated, 50 lb cans.....lb	2.20	2.45	2.60	2.20	2.60	2.00
Hydrobromide, 1 lb bot...lb.	4.80	5.00	5.00	4.80	5.00	4.80
Hydrochloride, 1 lb bot...lb	6.05	6.55	6.55	6.05	6.55	6.05
Sulfate, 1 lb bot.....lb.	5.40	5.90	5.90	5.40	5.90	5.40
Sodium Benzoate, tins....lb.	...	3.05	3.05	3.05	3.05	3.05
Salicylate, tins.....lb.	...	2.95	2.95	2.95	2.95	2.95
Calcium Bromide, 100 lb cs..lb.	...	.60	.60	.60	.60	.60
Carb, USP, 175 lb bbls....lb.	.05	.06	.06½	.04½	.06½	.04½
Glycerophos, 250 lb bbls...lb.	...	1.40	1.40	1.40	1.40	1.40
Hypophos, USP, 25 lb cans lb.	.60	.65	.65	.60	.65	.60
Iodide, 5 lb bot.....lb.	...	4.85	4.85	4.35	4.35	.35
Lactate, USP, 500 lb bbls lb.	.45	.50	.50	.45	.50	.45
Lactophosphate Soluble...lb.	...	1.20	1.20	1.20	1.20	1.20
Powdered tins.....lb	...	1.00	1.00	1.00	1.00	1.00
Insol, powd tins.....lb.	...	.50	.50	.50	.50	.50
Sulfide, USP, 100 lb drs...lb.	.21½	.24	.24	.21½	.24	.21½
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.60	.61	.64	.60	.64	.59½
Refined powd.....lb.	.62	.63	.66	.62	.66	.63
½ oz tab, 100 lb cases....lb.	.72	.73	.77	.72	.77	.73
Liniment, bbls.....gal.	2.20	2.30	2.30	2.20	2.30	2.20
Monobrom, 100 lb cases...lb.	1.85	1.90	1.90	1.85	1.90	1.85
Casein edible, 100 lb kegs...lb.	.45	.55	.55	.45	.55	.45
Charcoal Animal medicinal jars incl.....lb.	...	.50	.50	.50	.50	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07	.07	.05½	.06	.05½
Chloroform, USP, 50 lb drs...lb.	.25	.27	.27	.25	.30	.25
Chloral Hydrate, USP, 25 lb jars.....lb.	.78	.80	.80	.75	.80	.75
100 lb drums.....lb.	.73	.75	.75	.55	.75	.70
Cholesterin.....oz.	5.50	5.85	5.85	5.50	5.85	5.50
Chromium Sulfate Scales, tins .....lb.	.45	.50	.60	.45	.60	.55
Powdered tins.....lb.	.50	.55	.65	.50	.65	.60
Chrysarobin, 50 lb tins.....lb.	3.75	4.10	4.10	3.75	4.25	3.75
Cinchonine Alk, 100 oz tins.oz.	...	.38	.38	.38	.38	.38
Crystal.....oz.	.43	.46	.46	.43	.68	.65
Sulfate, 100 oz tins.....oz.	...	.25	.25	.25	.25	.25
Cinchonidin Sulfate, 100 oz tins .....oz.	.35	.35	.35	.35	.35	.35
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07	11.07	11.07	11.07	11.07
Hydrochloride, USP.....oz.	...	8.50	8.50	8.50	8.50	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	11.87	11.87	11.87	11.87	10.37
Hydrobromide.....oz.	...	8.92	8.92	8.92	8.92	8.92
Hydrochloride.....oz.	...	10.87	10.87	10.87	10.87	9.87
Nitrate, oz vl 10 oz lots....oz.	...	9.80	9.80	9.80	9.80	8.30
Phosp. oz vl, 10 oz lots....oz.	...	9.42	9.42	9.42	9.42	7.92
Salicylate.....oz.	...	8.25	8.25	8.25	8.25	6.75
Sulfate, oz vl, 10 oz lots...oz.	...	9.67	9.67	9.67	9.67	8.42

'Roche' Fine Chemicals

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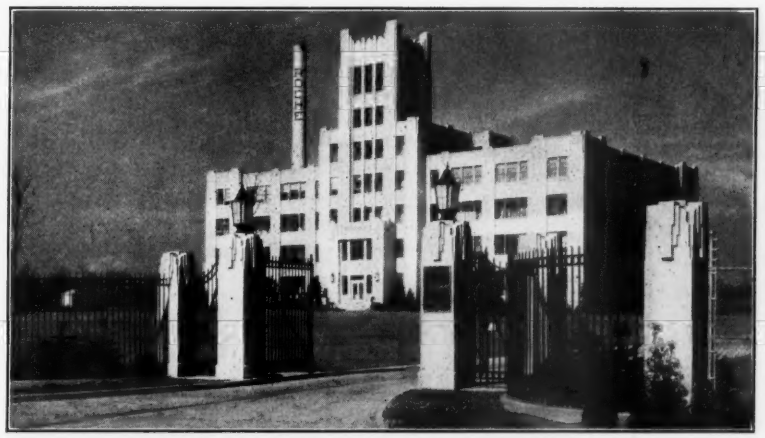

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{ *Monthly Review* }

Newfoundland Cod Liver Oil

Newfoundland is experiencing a good demand for cod liver oil and on June 30 stocks were low. Producers in Newfoundland claim that their cod liver oil does not suffer in competition with oil produced in Iceland and Norway. Three hundred tons were exported for the second quarter of 1930 as against 137 tons for the previous quarter. (Vice Consul T. D. Bergen, St. John's, Newfoundland.)

Cinchona Production

The production of cinchona bark for the entire Netherland East Indies during 1930 is estimated at 11,341,662 kilos, divided 9,681,662 kilos and 1,660,000 kilos between Java and Sumatra respectively. The estimates are based on returns from 87 estates growing cinchona. The total production from January to April was 2,768,168 kilos for Java and 614,484 kilos for Sumatra. (Assistant Trade Commissioner August Brauer, Jr., Batavia.)

Menthol Price Recovers

Menthol has strengthened somewhat now being offered at $4.00 and $4.25 per lb. The rise on spot followed higher replacement costs. An improvement in demand has been noticeable with a corresponding easing off in competition which has been particularly keen for a long time.

French Tartaric Acid Expansion

Societe Generale des Produits Tartriques, Paris, is launching a new issue of 20,000 shares at a price of 500 francs each. The object of this stock floatation is to enable the company to exploit throughout the whole world its process for manufacture of tartaric acid from drainage of wine and skins of pressed grapes. The company has opened a plant at Saint-Laurent-de-Aigouzes for treatment of this residue and is producing annually 1,000 tons of tartaric acid in the form of calcium tartrate.

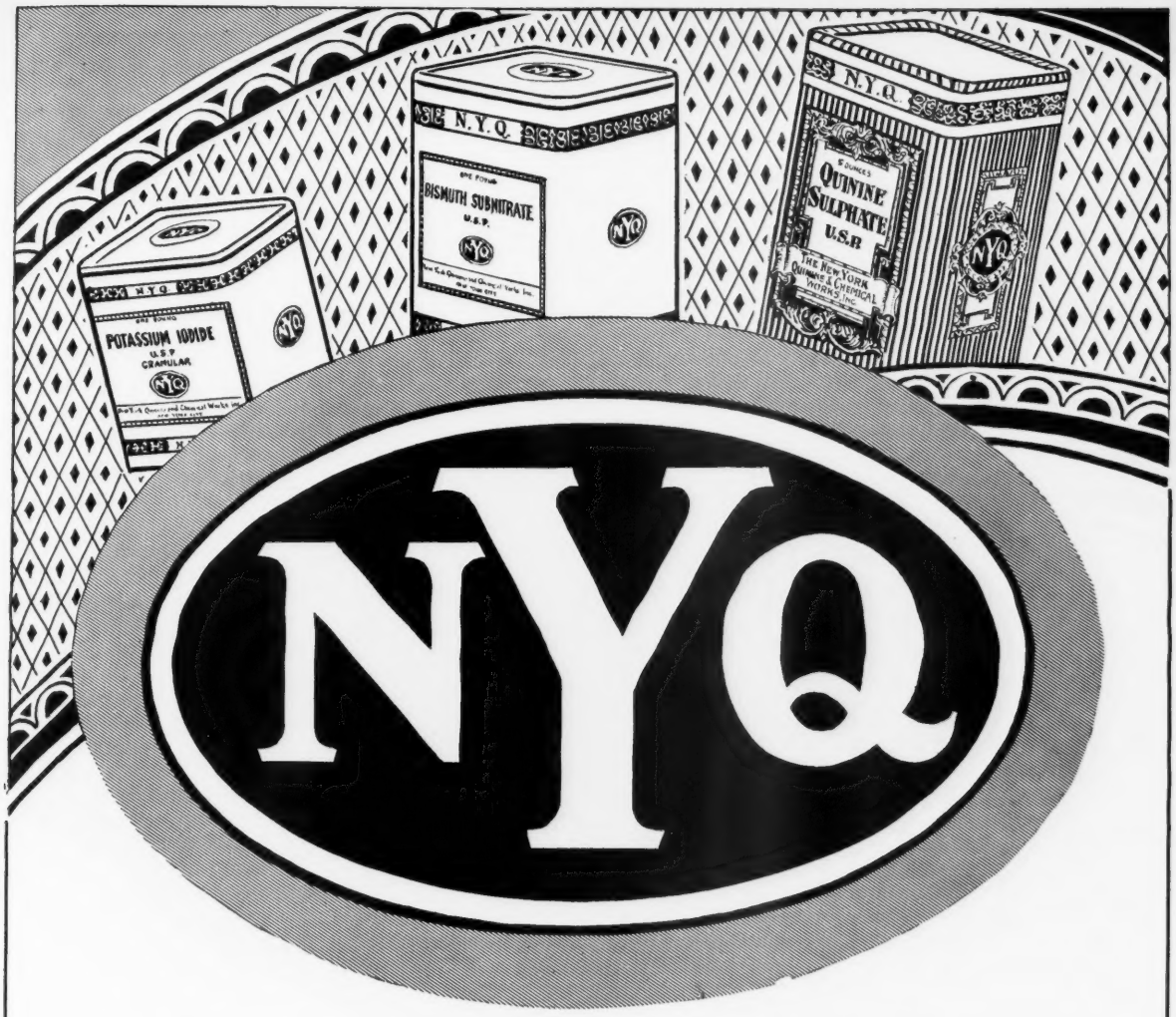
Societe Alsacienne de Produits Chimiques, which has just perfected a process for the manufacture of calcium tartrate from grape skins by first extracting the alcohol, ceded this process to the Societe Generale des Produits Tartriques, which thereby becomes the most important producer of tartaric products in France.

Contracts for terms of six to twelve years have been closed with local wine cooperatives, thus securing for the company from 30,000 to 40,000 tons of grape skins. These skins are treated from September to January in the seven plants of the company.

There were produced in the United States 132,137,916 pounds of glycerin of all kinds during the first half of 1930, a slight drop from the 132,450,466 pounds for the corresponding period of 1929. Production of the three types during the first half of 1930 as compared with the same period of 1929 follow:

	First Half 1929 Pounds	*First Half 1930* Pounds
Crude 80 per cent. basis	69,822,055	71,785,580
Dynamite	29,496,809	23,722,533
Chemically pure	33,131,602	36,629,803
Total	132,450,466	132,137,916

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00	20.00	20.00	20.00
Salicylate, 1 oz vls.....oz.	...	35.50	35.50	35.50	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.25½	.26	.27½	.25½	.28	.26½
Imp. powd. 224 lb bbls....lb.	.25½	.25½	.25½	.25½	.27	.25½
Creosote, USP, 42 lb cbys....lb.	.45	.47	.47	.40	.42	.40
Carbonate, 150 lb.....lb.	1.50	1.60	1.60	1.50	1.60	1.50
Cresol, USP, 400 lb drums...lb.	...	.20	.20	.20	.20	.20
500 lb drums.....lb.	.14	.17	.20	.14	.20	.20
DIGITALIN Pure, 1 oz vial.oz	15.00	15.50	15.50	15.00	15.50	15.00
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80	2.80	2.45	2.50	2.45
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00	40.00	35.00	30.07	30.07
Emetine Alk, 15 gr vial.....oz.	...	.85	.85	.85	.85	.85
Hydrochloride, USP, 1 oz vl .....oz.	25.00	26.00	36.00	25.00	36.00	35.00
15 grain vials.....oz.	2.50	2.70	2.70	2.50	2.70	2.50
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50	2.50	2.25	2.50	2.25
Imp. 100 lb bbls.....100 lb.	2.30	2.35	2.35	1.95	2.00	1.95
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00	19.00	18.50	19.00	18.50
Eserine Alk, 1 oz vials.....oz	...	50.00	50.00	50.00	50.00	50.00
Salicylate, 1 oz vials.....oz.	...	40.00	40.00	40.00	40.00	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00	40.00	40.00	40.00	40.00
ETHER, USP, 55 lb drums..lb.	...	.16	.18	.16	.18	.18
Anaesthesia, 55 lb drums..lb.	.21	.23	.23	.21	.23	.23
Nitrous, 1 lb bot.....lb.	...	.80	.98	.80	.98	.80
Ethyl Chloride, 200 lb bot...lb.	.22	.24	.24	.22	.24	.22
Ethyl Iodide, 5 lb bot.....lb.	...	6.25	6.25	6.25	6.25	6.25
Formaldehyde, USP, 100 lb cbys lc-l wks.....lb.	.09½	.09¾	.10¼	.09½	.10¾	.09¾
Gall Extract.....lb.	.20	.21	.21	.20	.21	.20
GLANDULAR SUBSTANCES						
Duodenal Substance, 1 lb lots	...	5.50	5.50	5.50	...	...
Liver Substance (Hepatic) 1 lb lots.....	...	4.50	4.50	4.50	...	...
Orchic Substance (Testicular)	...	4.75	4.70	4.75	...	...
Ovarian Substance, whole, 1 lb lots.....	...	26.00	26.00	26.00	...	...
Ovarian Residue, 1 lb lots....	...	20.00	20.00	20.00	...	...
Pituitary Substance, whole 1 lb lots.....	...	40.00	40.00	40.00	...	...
Pituitary Substance, Anterior Lobe, 1 lb lots.....	...	27.00	27.00	27.00	...	...
Thyroid, U. S. P., 1 lb lots...	...	4.75	4.75	4.75	...	...
Oxgall Powder, 1 lb lots....	...	1.35	1.35	1.35	...	...
GLYCERIN, CP, 550 lb drums .....lb.	...	.13	.14	.13	.15½	.13
Gold Chloride, bottles.....oz.	12.00	12.50	12.50	12.00	12.50	12.00
Guaiacol, liq. USP. 100 lb, cbys.....lb	1.65	1.75	1.75	1.65	1.75	1.65
Crystals.....lb	2.25	2.50	2.50	2.25	2.50	2.25
Benzoate, 1 lb bottles.....lb.	...	13.00	13.00	13.00	13.00	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50	2.50	1.70	2.50	1.70
Halazone, 5 lb bot.....lb.	2.75	3.25	3.25	2.75	3.25	2.75
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47	.56½	.46	.62½	.48
Homatropine Hydrobrom USP, ...oz.	...	14.50	14.50	14.50	14.50	14.50
5 oz and 1 oz vials.....oz.	...	13.50	13.50	13.50	13.50	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00	21.00	20.50	21.00	20.50
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00	21.00	20.50	21.00	20.50
Sulfate, 1 oz vial.....oz.						
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.	22.50	23.00	23.00	22.50	23.00	22.50
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	...	40.00	40.00	40.00	40.00	40.00
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	.03½	.04½	.04½	.03½	.04½	.03½
5 oz, 1 oz vials.....oz.	13.07	35.00	35.00	13.57	13.57	13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	13.57	13.57	13.07	13.57	13.57
Amorphous, 1 oz vial...oz.	...	25.07	25.07	25.07	25.07	25.07
Hydrobromide, USP, 1 oz vial .....oz.	...	75.07	75.07	75.07	75.07	75.07
Sulfate, 1 oz vial.....oz.	...	25.00	35.07	25.00	35.07	35.07
Hypoquinone, 100 lb kegs...lb.	...	25.07	25.07	25.07	25.07	25.07
ICHTHYOL, tins.....lb.	4.00	1.25	1.25	1.20	1.25	1.20
Iodide Arsenous, 5 lb bot ..lb.	...	4.25	4.25	4.00	4.25	4.00
Arsenous-Mercuric soln, 5 lb bot.....qt	...	5.20	5.20	5.20	5.20	5.20
Iodine, crude, 200 lb kegs...lb.	4.35	.26	.26	.26	.26	.26
Resublimed, 10 lb tars....lb.	4.65	4.35	4.35	4.35	4.35	4.35
Tincture demis.....gal.	...	4.70	4.70	4.65	4.70	4.65
Iodoform, powd 10 lb bot...lb.	...	4.50	4.80	4.50	4.80	4.50
Iron & Ammonium Citrate, USP, 50 lb cans.....lb.	.65	6.50	6.50	6.00	6.00	6.00
Chloride, USP, lump 400 lb bbls.....lb.	.06	.66	.66	.65	.66	.64
Citrate, USP, VIII 25 lb can .....lb.	.94	.08	.08	.06	.08	.06
Hypophosphite, 5 lb cans..lb.	1.55	1.01	1.01	.94	1.01	.94
Iodide, 1 lb bottles.....lb.	...	1.65	1.65	1.55	1.65	1.55
Phosphate, USP, 50 lb cans .....lb.	...	4.28	4.28	4.28	4.28	4.28
& Potas Oxalate, 250 lb bbl .....lb.	...	.69	.69	.69	.69	.69
Pyrophosphate, USP, 50 lb .....lb.	.74	.45	.45	.45	.45	.45
& Sod Oxalate, 24 lb box...lb.	...	.80	.80	.74	.80	.74
Sulfate, USP, crys bbls....lb.	.04	.30	.30	.30	.30	.30
Ferrous dried bbls.....lb.	...	.04½	.04½	.04	.04	.04½
Valerate, tins.....lb.	2.75	.08	.08	.08	.08	.08
		3.00	3.00	2.75	3.00	2.75



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Iodoform
Glycerophosphates
Opium
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{ *Monthly Review* }

Italian Essential Oils

A cable from Naples, dated August 2, stated that essential oils were very quiet in July, and there was little demand from the United States or Europe. While prices quoted were slightly weaker than during June, they were largely nominal owing to lack of transactions. Weakening prices were attributed to the desire of producers to reduce stocks before the fall campaign. Prices of oils at the close of the month in lire per Sicilian pound were as follows:

Lemon sponge process, 10 to 10¼; lemon machine pressed, 8; sweet orange sponge process, 23; mandarin sponge, 40; bergamot, 23 to 23½. Shipments of oil to New York during July were negligible. Stocks of oils are abundant, particularly lemon and bergamot, which are relatively heavier than mandarin and orange. In keeping with the Government's plan to intervene to alleviate the depression in the bergamot industry a meeting with producers was held for establishing an association and appointment of a commission for formulating remedial measures. (From the Consulate at Palmermo, and Messina.)

The French administration of indirect revenue has just announced that all dried plants, or parts of dried plants (leaves, fruit, bark, etc.) containing an aroma or a perfume which is destined for use in the kitchen, pharmacies, etc., will benefit from a tax reduction of 0.55 per cent. provided by article 13 of the law of April 26 last.

The same is true of fresh plants sold in the form of flowers or in any other form, as long as they are destined for the manufacture of perfumes or extracts. (Assistant Trade Commissioner Earle C. Taylor, Paris.)

Acetanilid Prices Down Sharply

Acetanilid prices have been reduced sharply to 28c per pound in 200 pound barrels, and 29c per pound in 100 pound kegs. These prices apply on spot shipments, or on contracts for twelve months with protection against further price decline. A still lower price of 27c per pound has been established for contracts involving 10,000 pounds or more. The reduction is reported to be due to an attempt to settle the market which has been subject to some price competition. This competition has naturally upset some of the larger sellers due to the fact that business is below normal at this time.

Argentina's import trade statistics show that Germany supplied 25,000, 41,000 and 26,000 of the 48,000, 59,000 and 37,000 kilos imported during the 1925-1927 period. Chile the principal producer of soap bark supplied the remainder. A large part of the soap bark consumed needs first be crushed or powdered and low labor cost combined with unexcelled facilities for this purpose places Germany in an advantageous position to reexport powdered soap bark.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Jalap Resin, USP lumps, 5 lb tins....lb.	...	4.00	4.00	4.00	4.00
Powdered, tins....lb.	...	4.65	4.65	4.65	4.65
Lead Acetate, USP, 100 lb kegs ....lb.	.16½	.19½	.18	.15	.19½ .15
Iodide, USP, VIII 5 lb bot.lb.	3.20	3.40	3.40	3.20	3.40 3.20
Lecithin, 5 oz jars....oz.	1.00	1.30	1.30	1.00	1.30 1.00
Licorice Ext Mass, cases....lb.	.19	.20	.20	.19	.20 .14
Compound powder, bbls...lb.	.11	.13	.13	.11	.13 .11
LITHIUM CARBONATE, 250 lb bbls....lb.	1.35	1.45	1.60	1.35	1.60 1.50
Citrate, USP, 100 lb kegs..lb.	...	1.70	1.70	1.70	1.70 1.70
Iodide, 5 lb bottles....lb.	...	5.65	5.65	5.40	5.40 5.40
Lobeline Sulfate, ¼ oz vial...oz.	...	8.75	8.75	8.75	8.75 8.75
Magnesium Carbonate, USP, 100 lb bbls....lb.	.08	.09	.10½	.08	.12 .10½
English, oz blocks....oz.	.16	.18	.18	.16	.18 .16
Glycerophosphate, 5 lb tins ....lb	3.20	3.25	3.25	3.20	3.25 3.20
Hypophosphite, 5 lb cans..lb.	1.15	1.20	1.20	1.05	1.05 1.05
Salicylate, 100 lb kegs....lb	...	1.10	1.10	1.10	1.10 1.10
Stearate, bbls....lb.	.23	.25	.25	.23	.25 .23
Manganese Glycerophosphate, 5 lb tins....lb.	2.90	3.00	3.00	2.90	3.00 2.90
Hypophosphite, USP, VIII 5 lb cans....lb.	1.35	1.40	1.40	1.35	1.40 1.35
Iodide, 1 lb bottles....lb.	6.40	6.65	6.65	6.40	6.65 6.40
MENTHOL, USP, 60 lb cases ....lb.	4.00	4.25	4.50	3.85	6.00 4.35
Synthetic, cases....lb.	3.00	3.25	3.25	3.00	3.25 3.00
Mercury Metal, 75 lb flasks...fl.	119.00	120.00	124.50	112.00	126.00 121.50
Bichloride, crys 25 lb box..lb.	...	1.81	1.81	1.81	1.81 1.81
Gran powd, 100 lb kegs..lb.	...	1.65	1.65	1.65	1.65 1.65
Bisulfate, 25 lb boxes....lb.	...	1.62	1.62	1.62	1.62 1.62
Blue Mass, 25 lb boxes....lb.	...	1.03	1.03	1.03	1.03 1.03
Powd, 25 lb boxes....lb.	...	1.04	1.04	1.04	1.04 1.04
Blue Ointment, USP, 50%, 25 lb cans....lb.	...	1.29	1.29	1.29	1.29 1.29
Mild 30%, 25 lb cans....lb.	...	.92	.92	.92	.92 .92
33 1/3% mercury....lb.	...	.94	.94	.94	.94 .94
Calomel, 50 lb boxes....lb.	...	2.05	2.05	2.05	2.05 2.05
English....lb.	2.75	2.80	2.80	2.75	2.80 2.75
Iodide, green, 25 lb jars....lb.	...	4.80	4.80	4.80	4.80 4.80
Red, USP, 25 lb jars...lb.	...	4.89	4.89	4.89	4.89 4.89
Yellow, USP, VIII, 25 lb jars....lb.	4.80	4.80	4.80	4.80	4.80 4.80
Red precip, USP, 25 lb boxes ....lb.	2.17	2.17	2.17	2.17	2.17 2.17
Powd., USP, 25 lb boxes.lb.	2.17	2.17	2.17	2.17	2.17 2 17
White precip, USP, 25 lb boxes....lb.	...	2.20	2.20	2.20	2.20 2.20
Powd., USP, 25 lb boxes.lb.	...	2.25	2.25	2.25	2.25 2.25
Salicylate, 25 lb bot....lb.	...	2.32	2.32	2.32	2.32 2.32
With chalk, USP, 25 lb boxes ....lb.	...	.93	.93	.93	.93 .93
Methanol, Pure 1c-1 drs...gal	...	.54	.57	.54	.57 .57
Methyl Salicylate, USP, 50 lb cans....lb.	.40	.42	.42	.40	.45 .40
Methylene Blue, USP, med 5 lb cans....lb	2.00	2.05	2.05	2.00	2.05 2.00
Milk powd, 150 lb bbls....lb.	.09	.12	.15	.09	.15 .14
MORPHINE Alk, 5 oz tin...oz.	10.90	10.95	11.35	10.90	11.35 9.85
Acetate, 5 oz tins....oz.	8.75	8.80	9.35	8.75	9.35 7.85
Hydrobromide, 5 oz tins, 10 oz lots....oz.	8.75	8.80	9.35	8.75	9.35 7.85
Hydrochloride, 5 oz tins, 10 oz lots....oz.	8.75	8.80	9.25	8.75	9.25 7.85
Ethyl Hydrochloride, 5 oz tins 10 oz lots....oz.	...	10.85	10.85	10.85	10.85 9.35
Sulfate, 5 oz tins, 10 oz lots ....oz.	8.75	8.80	8.85	8.75	8.85 7.85
Naphthalene Flake, 175 lb bbls wks....lb.	.04½	.05	.05	.04½	.05 .04½
Balls, 250 lb bbls wks....lb.	.05½	.06	.06	.05½	.06 .05
Oxgall, Purified, 5 lb bot....lb.	1.75	2.50	2.50	1.75	2.50 1.75
USP, 5 lb bot....lb.	2.00	2.50	2.50	2.00	2.50 2.00
Oxyquinoline Sulfate, tins...lb.	8.50	9.25	9.25	8.50	9.25 8.50
Pancreatin, USP, 100 lb....lb.	...	1.90	1.90	1.90	1.90 1.90
Paraffin, refd, 200 lb cs slabs 118-120 deg MP....lb.	.08	.09	.09	.08	.09 .08
128-132 deg MP....lb.	.07½	.07½	.07½	.07½	.07½ .07½
Para-Aldehyde, USP, 100 gal drums....lb.	.67	.77	.77	.67	.77 .67
Pepsin, USP, 100 lbs. 1:3000.lb.	...	2.25	2.25	2.25	2.25 2.25
100 lbs. 1:6000....lb.	...	4.00	4.00	4.00	4 00 4.00
100 lbs. 1:10000....lb.	...	6.50	6.50	6.50	6.50 6.50
Peptone, powd, 5 lb bot....lb.	...	...	...	...	... ...
PHENOLPHTHALEIN, USP, 100 lb drums....lb.	1.10	1.20	1.20	1.10	1 20 1.10
5 lb cans 100 lb lots..lb.	1.23	1.30	1.30	1.23	1.30 1.23
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots ....oz.	...	3.25	3.25	3.25	3.25 3.25
Nitrate, 25 oz lots....oz.	...	3.25	3.25	3.25	3.25 3.25
Single ounce....oz.	...	3.50	3.50	3.50	3.50 3.50
Alkaloid, 15 gr vials....vl.	...	.75	.75	.75	.75 .75
Piperazine Hydrate, 1 lb bot.lb.	...	15.00	15.00	15.00	15.00 15.00
Piperadine, 25 oz bottles....lb.	...	8.00	8.00	8.00	8.00 8.00
Popodhyllin 5 lb bottles....lb.	4.35	4.50	4.50	4.35	4.50 4.35
Potassium Acetate, USP, 100 lb kegs....lb.	.29	.30	.30	.29	.30 .29
Bicarb, USP, crys 320 lb bbls ....lb.	.09½	.10	.13½	.09½	.13½ .08½
Bromide, USP, crys 100 lb cs ....lb.	.42	.43	.43	.42	.40 .39
Citrate, USP, 50 lb bbl....lb.	.51	.53	.53	.51	.55 .51
Guaiacol Sulfonate....lb.	1.95	2.25	2.25	1.95	2.25 1.95

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{ Monthly Review }

Mexican Vanilla Continues Strong

Mexican vanilla beans are high at $4.25 and $5.50 per lb. and are considered strong at these figures. The Mexican crop is short and is now held in firm hands so that there is little possibility of any improvement. In fact, indications point to higher prices during the coming months.

Bourbon beans, on the other hand, are decidedly plentiful and have been weak in tone for some time. The price range is now $1.35 to $1.75 per lb. a decided reduction having taken place during the past month. It has also been indicated that better than above prices are being done on firm business.

It is reported from a reliable source that 2,000,000 pounds of Bourbon beans are available. This is normally a two years supply. It is estimated that New York dealers alone have in stock some 500,000 pounds of beans and that another 250,000 pounds is in manufacturers hands. The new crop is estimated at approximately 1,200,000 pounds, and there has been a generous carry-over. These figures would undoubtedly indicate a weak market for some time into the future.

Civet Exports

Ethiopian civet has previously been exported to an estimated extent of 30,000 to 40,000 ounces per annum. In 1928, the output was reduced to a probable 20,000 ounces, of which American perfumers took about half. The average price was about U. S. $1.92 per ounce in 1928. About the middle of 1928 demand slackened and prices dropped. Natives began to lose interest and to release their captive animals. About the middle of 1929, there was a revival of interest, because the price was low, and the price accordingly reacted to the neighborhood of U. S. $3 per ounce. The 1929 exports approximated the 20,000 ounce volume noted for 1928. Ethiopia's full production capacity of civet is not known, and may never yet have been reached. It is believed that they could in time, and at a price obtain considerable quantities.
(Vice Consul Jones L. Park, Addis Ababa, Ethiopia.)

Reunion Essential Oils

Exports of geranium oil from Reunion during 1929 amounted to 180,257 pounds valued at 16,283,292 francs ($640,194) as compared with those of 1928 totaling 180,920 pounds valued at 12,965,445 francs ($508,257). Shipments of vetiver oil declined in both quantity and value, from 33,893 pounds valued at 2,641,185 francs ($103,534) in 1928 to 30,225 pounds worth 2,488,977 francs ($97,857) in 1929. Shipments of ylang-ylang oil increased from 4,200 pounds valued at $30,316 in 1928 to 11,270 pounds valued at $82,582 in 1929.

France received 96 per cent. of the $821,000 worth of Reunion's 1929 essential oil exports as follows: Geranium oil, 173,401 pounds $616,127; vetiver oil, 29,973 pounds $98,820; ylang-ylang oil, 8,611 pounds $62,463.

The United States received 4 per cent. of Reunion's total essential oil exports, or 3,858 pounds of geranium oil, 2,645 pounds of ylang-ylang oil and 220 pounds of vetiver oil.

Great Britain received 3,169 pounds of geranium oil. (Consul J. S. Richardson, Tananarine, Madagascar.)

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Potassium Hypophosphite, 10 lb. cans ..... lb.	.80	.85	.85	.80	.85	.80
Iodide, USP, 100 lb cases .. lb.	3.25	3.30	3.30	3.25	3.55	3.25
Lactophosphate, 4 oz bot .. lb.	...	.90	.90	.90	.90	.90
Permangan, USP, crys, 100 lb drs wks ..... lb.	.15	.15½	.15½	.15	.15½	.15
Phosphate dibasic pure, kegs ..... lb.	...	.49	.49	.49	.49	.49
Salicylate, 25 lb cans .... lb.	...	1.18	1.18	1.18	1.18	1.18
Sulfate, USP, VIII, 100 lb kegs ..... lb.	.13	.15	.15	.13	.15	.13
Sulfocyanide, CP 15 lb jars lb.	...	.50	.50	.50	.50	.50
Tartrate, CP, tins ..... lb.	...	.65	.65	.65	.65	.65
Pyrogallol, USP, see Acid Pyrogallic	...	...	...	...	...	...
Quinidine Alk, 100 oz tins .. oz.	.70	.75	.75	.70	.75	.70
Sulfate, 100 oz tins ..... oz.	...	.50	.50	.50	.50	.50
QUININE SULFATE, USP, 100 oz tins ..... oz.	...	.40	.40	.40	.40	.40
1 oz tins, 100 oz lots .... oz.	...	.47	.47	.47	.47	.47
Dutch, 100 oz tins ..... oz.	...	.40	.40	.40	.40	.40
Java, 100 oz. tins ..... oz.	...	.40	.40	.40	.40	.40
Japanese 100 oz tins ..... oz.	...	.40	.40	.40	.40	.40
Acetate ..... oz.	...	.74	.78	.74	.78	.78
Arsenate ..... oz.	...	.76	.78	.76	.78	.78
Benzoate ..... oz.	...	.74	.78	.74	.78	.78
Bisulfate, USP ..... oz.	...	.40	.40	.40	.40	.40
Resale ..... oz.	...	.39	.39	.39	.39	.37
Citrate ..... oz.	...	.51	.51	.51	.51	.51
Dicarbonate, 1 oz tins .... oz.	...	2.56	2.56	2.56	2.56	2.56
Dihydrobromide ..... oz.	...	.54	.54	.54	.54	.54
Dihydrochloride, USP .... oz.	...	.54	.54	.54	.54	.54
Ethyl Carbonate, 16 oz tins ..... oz.	...	.70	.70	.57	.58	.58
Ferrocyanide ..... oz.	...	.74	.78	.74	.78	.78
Formate ..... oz.	...	.73	.73	.73	.73	.73
Glycerophosphate ..... oz.	...	.72	.80	.72	.80	.80
Hydrobromide, USP ..... oz.	...	.50	.50	.50	.50	.50
Hydrochlorosulfate ..... oz.	...	.50	.54	.50	.54	.54
Hydrochloride & Urea, USP ..... oz.	...	.74	.74	.74	.74	.74
Hypophosphite ..... oz.	...	.70	.70	.70	.70	.70
Lactate ..... oz.	...	.66	.66	.66	.66	.66
Phenolsulfonate ..... oz.	...	.78	.78	.78	.78	.78
Phosphate ..... oz.	...	.62	.62	.62	.62	.62
Salicylate, USP ..... oz.	...	.52	.52	.52	.52	.52
Tannate, USP ..... oz.	...	.41	.41	.41	.41	.41
Tartrate ..... oz.	...	.74	.78	.74	.78	.78
Valerate ..... oz.	...	.78	.78	.78	.78	.78
& Urea Hydrochloride, USP ..... oz.	...	.88	.88	.88	.88	.88
Rennet, N. F. 5 lb 1:25,000 .. lb.	2.95	3.50	3.50	2.95	3.50	2.95
Resorcinol, USP, 25 lb cans . lb.	1.92	1.97	1.97	1.60	1.75	1.65
Rochelle Salt, USP, 225 lb bbl ..... lb.	.19	.19½	.23½	.19	.23½	.23
Imp. USP, 300 lb bbls ..... lb	...	.23	.23	.23	.23	.23
Rock Sugar, 5 lb boxes ..... lb.	...	.15	.15	.15	.15	.15
Saccharin, USP, 10 lb cans .. lb.	1.70	1.80	1.80	1.70	1.80	1.70
USP, Soluble, 10 lb cans .. lb.	1.75	1.85	1.85	1.75	1.85	1.75
Salicin, USP ..... lb.	...	12.50	12.50	9.31	9.31	4.86
SALOL, USP, 100 lb drums .. lb.	...	.90	.90	.90	.90	.90
Saltpetre, powd, bbls wks .... lb.	.06½	.08½	.08½	.06½	.08½	.06½
Santonin, USP, bulk ..... lb.	123.00	133.00	133.00	129.50	129.50	129.50
Saponin, refined ..... lb.	1.30	1.50	1.30	1.50	1.30	1.30
Siedlitz Mixture, 250 lb bb .. lb.	...	.17½	.17½	.17½	...	...
Silver Metal, American ..... oz.	...	.42½	.57⅛	.42½	.57⅛	.57⅛
Iodide, 16 oz lots ..... oz.	...	.69	.69	.69	.69	.69
Nitrate, 100 oz bottles .... oz.	.32½	.34½	.42½	.32½	.42½	.40½
Nucleinate, bulk ..... oz.	...	.37	.37	.37	.37	.37
Proteinate ..... oz.	.39	.41	.41	.32	.32	.32
SODIUM BENZOATE, USP, 100 lb bbls ..... lb.	.45	.49	.49	.45	.49	.45
Bromide, USP, 100 lb kegs .lb.	.42	.43	.43	.42	.43	.42
Cacodylate, USP, 25 lb bot ..... lb.	4.75	5.90	5.90	4.75	5.90	4.75
Citrate, USP, X 50 lb kegs .lb.	.45	.47	.47	.45	.47	.45
USP VIII, 50 lb kegs .... lb.	.38	.40	.40	.38	.40	.38
Glycerophosphate, USP, crys 25 lb cans ..... lb.	1.40	1.55	1.55	1.40	1.55	1.40
Powder, 25 lb tins ..... lb.	1.45	1.60	1.60	1.45	1.60	1.45
Soln, USP, 25 lb tins .... lb.	1.05	1.20	1.20	1.05	1.20	1.05
Hypophosphite, USP, 25 lb cans ..... lb.	.70	.75	.75	.70	.75	.70
Iodide, USP, 25 lb jars .... lb.	4.25	4.30	4.30	4.25	4.30	4.25
Phosphate (Mono-Sodium), 100 lb kegs ..... lb.	.30	.31	.31	.30	.31	.30
Di-Sodium USP, granular, 275 lb bbls ..... lb.	.07½	.08	.08	.07½	.08	.07½
Pyrophosphate, 100 lb kegs ..... lb.	...	.29	.29	.29	.29	.29
Salicylate, 100 lb kegs .... lb.	...	.47	.47	.47	.47	.47
Sulfocarbolate, USP, 100 lb kegs ..... lb.	...	.31	.31	.31	.31	.31
Sulfocyanate, CP crys, jars included ..... lb.	...	.60	.60	.60	.60	.60
Spartein Sulfate, USP, 25 oz bulk ..... oz.	.65	.70	.70	.65	.70	.60
Single oz vial ..... oz.	.77	.90	.90	.77	.90	.77
STRONTIUM BROMIDE USP, 50 lb kegs ..... lb.	.51	.52	.52	.51	.52	.51
Carb, 100 lb kegs wks .... lb.	...	.20	.20	.20	.20	.20
Iodide, USP, 25 lb jars .... lb.	...	4.00	4.00	4.00	4.00	4.00
Lactate, kegs ..... lb.	.90	1.10	1.10	.90	1.10	.90
Nitrate, 600 lb bbls NY .. lb.	.08	.08½	.08½	.08	.08½	.08
Imp. bbls NY ..... lb.	.08	.08½	.08½	.08	.08½	.08
Salicylate, USP, 100 lb keg lb.	...	1.10	1.10	1.10	1.10	1.10

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{ Monthly Review }

Hungarian Essential Oils

There are 15 or more botanicals in Hungary yielding essential oils that grow wild or are cultivated. Among these might be mentioned mustard, coriander, sage, marjoran, peppermint, chenopodium, cumin, lavender, anise, hyssop, thyme, chamomile, juniper berries, valerian, tansy and others.

About 750 acres are devoted to raising the plants mentioned. All botanicals, utilized for their essential oils, are domestic products. The best and finest oils are produced in the Budapest district. The average yield of oil per acre of raw material varies between 20 and 50 kilos.

The distillation of herbs and flowers is from June to September, the methods used about the same as other countries, all the processes being generally known. Production would undoubtedly increase if the demand warranted it.

Germany has purchased practically all the 400 tons of essential oils produced in Hungary, during the past five years.

American merchants could probably obtain Hungarian oils direct from primary sources in Hungary rather than through agents in Hamburg. It is thought that better prices could be obtained in the primary market and the chances of adulteration would be greatly lessened. A list of exporters is available upon application to Commercial Attache W. A. Hodgman, Budapest, Hungary.

Balsam Imports Off

The imports of crude balsams into the United States from Honduras, Nicaragua, El Salvador, and the total imports from all countries during the calendar years 1922 to 1929, inclusive, were as follows:

	1923		1925	
	Pounds	Dollars	Pounds	Dollars
Honduras	11,559	12,395	8,689	11,689
Nicaragua	7,151	8,981	6,045	7,653
El Salvador	50,974	66,400	43,794	59,322
	1927		1929	
	Pounds	Dollars	Pounds	Dollars
Honduras	4,473	5,629	9,532	12,090
Nicaragua	12,214	16,066	14,707	20,460
El Salvador	50,283	66,001	45,950	62,136

	Total Imports	
	Pounds	Dollars
1923	367,738	193,064
1925	499,646	261,169
1927	412,668	204,327
1929	407,219	228,191

Austrian Essential Oils

Austria can not be considered as an important source of supply of botanicals from which essential oils are derived.

Austria produces chiefly pine needle and fir needle oils, the most important specialty being cleum pini pumilionis which is very popular on account of its supposedly therapeutic properties (invigorating addition to baths, cure for colds) and its pleasant odor.

The present Austrian production is not very important, but quantities up to approximately 4,000 kegs yearly could be obtained without difficulty, and distillers are much interested in the development of outside markets which would enable them to produce on a larger and therefore more profitable basis. (Commercial Attache H. Lawrence Groves.)

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Strophanthin, USP, 1 oz vial	oz. 19.00	19.00	19.00	19.00	19.00
Crystals	lb. 75.00	75.00	75.00	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins	oz. ...	.61	.66	.61	.66	.61
Powdered	oz. ...	.51	.56	.51	.56	.51
Acetate	oz. ...	.65	.65	.65	.65	.65
Arsenate, 25 oz cans	oz. ...	.65	.65	.65	.65	.65
Glycerophosphite, USP	oz. ...	.65	.65	.65	.65	.65
Hydrobromide	oz. ...	.65	.65	.65	.65	.65
Hydrochloride	oz. ...	.65	.65	.65	.65	.65
Hypophosphite	oz. ...	.75	.75	.75	.75	.75
Nitrate, USP	oz. .55	.72	.72	.55	.72	.55
Phosphate	oz. ...	.65	.65	.65	.65	.65
Sulfate, USP, powd	oz. ...	.42	.42	.42	.56	.42
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90	5.90	5.80	5.90	5.80
Milk, USP, 200 lb bbls	lb. .18	.20	.20	.18	.20	.18
Sulfonethylmethane, USP, 10 lb boxes	lb. 3.85	4.05	4.05	3.85	4.05	3.85
Sulonmethane, USP, 10 lb box	lb. 2.65	3.85	3.85	2.65	3.85	2.65
Sulfur flwrs, washed, USP, 125 lb bbl	lb. ...	.06	.06	.06	.06	.06
Iodide, USP, VIII, 5 lb bot	lb. ...	4.55	4.55	4.55	4.55	4.55
TARTAR EMETIC, USP, 300 lb bbls	lb. .33	.35	.35	.29	.31	.29
Terebene, tins	lb. ...	.85	.85	.85	.85	.85
Terpin Hydrate, USP, 100 lb kegs	lb. .39	.41	.42	.39	.42	.40
Theobromine Alk, 5 lb cans	lb. 1.90	2.25	2.25	1.90	2.25	1.90
Sod. Salicylate, 1 lb bot	lb. ...	2.10	2.10	2.10	2.10	2.10
Sod. Benzoate, 1 oz vials	oz. ...	1.00	1.00	1.00	1.00	1.00
Thymol, USP, 25 lb tins	lb. 2.00	2.25	2.70	2.00	2.70	2.25
Iodide kegs	lb. 6.00	7.00	7.00	6.00	7.00	6.00
Veratrine Alkaloid	oz. ...	2.25	2.25	2.25	2.25	2.25
Sulfate, 1 oz vials	oz. ...	2.25	2.25	2.25	2.25	2.25
Witch Hazel Ext., 50 gal bbl	gal. .60	.80	1.00	.60	1.00	.80
Zinc Carb, USP, 100 lb keg	lb. .28	.31	.31	.28	.31	.28
Chloride, USP, 25 jars ex	lb. .24	.29	.29	.24	.29	.24
Iodide, 5 lb bottles	lb. ...	5.22	5.22	5.22	5.22	5.22
Oxide, USP, 100 lb bbls	lb. .13	.14	.17½	.13	.18	.16½
Stearate, USP, 50 lb bbl	lb. .25	.27	.27	.24	.26	.24
Sulfate, USP, 100 lb bbl	lb. .08	.09	.09	.08	.09	.08
Sulfocarbolate, 100 lb kegs	lb. .23	.29	.29	.23	.29	.23

Natural Derivatives

Anethol, 2 lb bot	lb. 1.90	2.15	2.50	1.90	1.30	1.25
Borneol, 1 lb bot	lb. 2.50	3.00	3.00	2.40	2.50	2.40
Carvol, 5 lb bot	lb. 3.60	4.00	4.00	3.50	3.60	3.50
Citral, 25 lb cans	lb. 2.65	4.00	4.00	2.65	2.75	2.70
Citronellal 1 lb bot	lb. 2.00	4.00	4.00	2.00	2.75	2.70
Eucalyptol, USP, 50 lb cans	lb. .85	.90	1.05	.85	1.05	1.00
Eugenol, USP, 25 lb cans	lb. 3.50	4.00	4.00	2.70	2.75	2.70
Geraniol, domestic, 50 lb cases	lb. 2.50	2.70	2.70	2.50	2.70	2.50
Imported, 5 lb bot	lb. 2.90	3.10	3.10	2.90	3.10	2.90
Iso-Eugenol, 1 lb bot	lb. 3.75	3.80	3.80	3.75	3.80	3.75
Imported, 1 lb bot	lb. 3.70	3.80	3.80	3.70	3.80	3.70
Linalol from Bois de Rose, 5 lb bot	lb. 3.00	5.00	5.00	3.00	3.25	3.20
Rhodinol, 1 lb bot	lb 6.25	20.00	20.00	6.25	7.75	7.50
Saffrol, drums	lb. .35	.37	.37	.27	.27	.27
60 lb cans	lb. .37	.39	.39	.29	.29	.29

Synthetic Aromatics

Acetophenene, CP, 1 lb bot	lb. 3.50	3.65	3.65	3.50	3.65	3.50
Aldehyde, C 8 (Otcyl) 1 lb bot	lb. ...	50.00	55.00	50.00	55.00	50.00
C 7, 1 lb bot	lb. 4.50	5.50	5.50	4.50	5.50	4.50
C 9 (Nonyl), 1 lb bot	lb. .	140.00	140.00	140.00	140.00	140.00
C 10 (Decyl), 1 lb bot	lb. .	48.00	48.00	48.00	48.00	48.00
C 14, 1 lb bot	lb. .	32.00	32.00	32.00	32.00	22.50
C 16, 1 lb bot	lb. ...	24.00	24.00	24.00	32.00	24.00
Aubepine, see Anisic Aldehyde						
AMYL ACETATE, pure, 5 gal cans	gal. 5.50	6.85	6.85	5.50	6.85	4.75
Butyrate, 1 lb bot	lb. 1.25	1.50	1.75	1.25	1.75	1.70
Butyrate, 5 lb bot	lb. ...	1.00	1.75	1.00	1.75	1.75
Cinnamate, 5 lb bot	lb. 9.50	9.75	9.75	9.50	9.75	9.50
Formate, 1 lb bot	lb. ...	1.90	1.90	1.90	1.90	1.90
Formate, 5 lb bot	lb. ...	1.75	1.75	1.75	1.75	1.75
Phenyl Acetate, 1 lb bot	lb. 4.50	5.00	5.00	4.50	5.00	4.50
Salicylate, 100 lb cbys	lb. 1.25	1.30	1.30	1.25	1.30	1.25
Imported	lb. 2.25	2.50	2.50	2.25	2.50	2.25
Anisic Aldehyde, 1 lb bot	lb. 4.00	4.50	4.50	3.00	3.25	3.00
Benzaldehyde, USP, 40 lb cbys	lb. ...	...	...	...	...	...
50 lb cbys	lb. 1.45	1.55	1.55	1.25	1.35	1.25
FFC, 40 lb cbys	lb. 1.35	1.45	1.45	1.35	1.45	1.35
Benzoic Ether, see Ethyl Benzoate						
Benzophenone, 1 lb bot	lb. 4.50	5.00	5.00	4.50	5.00	4.50
Benzyl Acetate, 100 lb cbys	lb. .90	1.10	1.10	.90	1.10	.90
Alcohol, 5 lb bot	lb. 1.20	1.30	1.35	1.20	1.35	1.25
BENZYL BENZOATE	1.15	1.20	1.40	1.15	1.40	1.35
Medicinal, FFC	lb. ...	1.40	1.40	1.40	1.40	1.40
Buytrate, CP, 1 lb bot	lb. 9.25	9.50	9.50	9.25	9.50	9.25

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HARSHAW CHEMICALS

{ Monthly Review }

Ceylon Citronella Exports

Citronella is easier with very little call for the commodity. Competition has been noticeably keen with no action reported. Ceylon is offered at 53c and 55c per lb. Java, although unchanged in price also shows an easier undertone.

The following table gives the exports from Ceylon of citronella oil for the years 1928 and 1929, with the countries of destination. The values have been translated into dollars at 3 rupees to $1.

The declared exports to the United States for 1928 were 441,257 pounds valued at $156,782, and for 1929, 421,726 pounds valued at $157,970.

	1928		1929	
Country of Destination	*Pounds*	*Value*	*Pounds*	*Value*
United Kingdom	325,000	$101,682	306,000	$106,767
Australia	69,000	18,294	74,000	25,976
British India	44,000	15,008	34,000	12,967
Argentine Republic	13,000	3,710	21,000	7,195
China	24,000	6,913	14,000	4,731
France	17,000	4,474	28,000	9,737
Germany	159,000	48,209	137,000	46,863
Netherlands	53,000	15,693	59,000	20,485
Italy	18,000	4,953	32,000	10,900
United States	426,000	115,880	415,000	141,812
Other countries	49,000	13,561	43,000	16,569
Total	1,197,000	348,377	1,163,000	404,002

(Consul S. W. Eells, Colombo.)

The citrus oil situation remains unchanged in that the long prevalent weakness continues unabated. Although prices were considered very low and distinctly in the buyer's favor, buying for consumption was conspicuous by its absence, and further reductions were made during the month on both lemon and orange oil.

Bergamot is easy in undertone although the spot market has not changed in price during the past month. The easy undertone in the primary market is responsible for the local situation. Demand is dull.

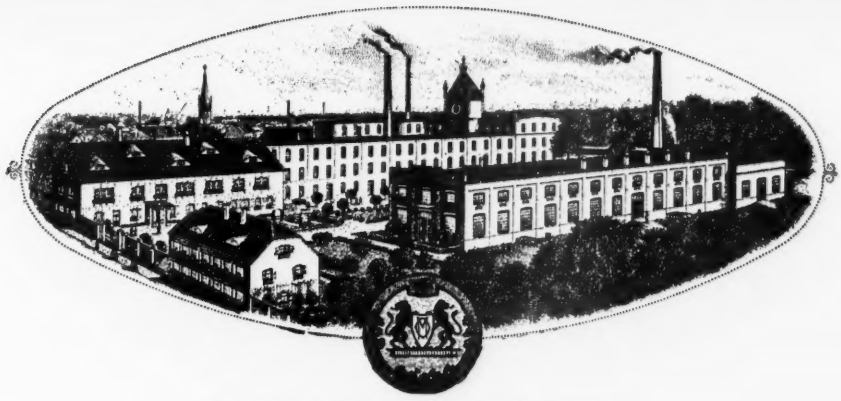
French perfumery, perfume material and essential oil exports to the United States for the first quarter of 1930 were as follows: Perfumery and perfume materials $328,000, and essential and distilled oils $350,000. (Consul General L. J. Kenna, Paris.)

Wormwood has been reduced to $7.00 and $7.25 per lb. showing a tendency to get down to normal levels. Demand has been noticeably dull with the natural tendency under such circumstances for dealers to shade prices as an inducement to buyers.

Croton is extremely scarce with practically no stocks available in the spot market. Prices have gone to $5.50 and $5.75 per lb. in spite of the fact that demand has been very light. An improvement in call would undoubtedly send prices to still higher levels.

Exports of perfumes and toilet preparations from France continued to increase in value during the last three years having attained an average yearly value of approximately $22,000,000. The United Kingdom, the United States, Belgium, Argentina, and Italy were the best markets.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Benzyl Cinnamate, 1¼ bot lb.	7.00	7.25	9.50	7.00	9.50	9.25
Formate, 1 lb bot. . . . . lb.	3.25	3.35	3.35	3.15	3.25	3.15
Propionate, 1 lb bot. . . . . lb.	3.60	3.75	3.75	3.60	3.75	3.60
Succinate, 1 lb bot. . . . . lb.	5.25	5.50	5.50	5.25	5.50	5.25
Valerate, 5 lb bot. . . . . lb.	3.00	3.25	3.25	3.00	3.25	3.00
Bornyl Acetate, 1 lb bot. . . . lb.	2.25	3.35	3.35	2.90	3.00	2.90
Bromstyrol, 25 lb cases. . . . . lb.	4.50	4.65	4.65	4.10	4.25	4.10
Butyl Anthranilate dom, 1 lb bot. . . . . lb.						
Butyric Ether, see Ethyl Butyrate.						
Cinnamic Acid, 5 lb cans. . . . lb.	3.25	3.50	3.50	3.25	3.50	3.25
Alcohol liquid, 1 lb bot. . . lb.	3.00	3.10	3.35	3.00	3.35	3.25
Crystallizable. . . . . lb.	7.00	8.00	8.00	7.00	8.00	7.00
Aldehyde. . . . . lb.	2.25	2.50	2.50	2.25	2.50	2.25
Imported, 1 lb bot. . . . . lb.	7.75	9.00	9.00	7.75	9.00	7.75
Citronelyl Acetate, 1 lb bot. . lb.	6.00	6.25	8.00	6.00	8.00	7.75
Coumarin, 25 lb cans. . . . . lb.	3.50	4.00	4.00	3.50	4.00	3.50
DECYL ALCOHOL. . . . . lb.	25.00	28.00	28.00	25.00	28.00	25.00
Diethyl Phthlate see Chemicals						
Diphenyloxide, 25 lb tins. . . . lb.	1.00	1.15	1.15	1.00	1.15	1.00
Diphenyl Methane. . . . . lb.	1.75	2.00	2.00	1.50	1.75	1.50
Duodecyl Alcohol. . . . . lb.	20.00	22.00	22.00	20.00	22.00	20.00
Ethyl Acetate, pure, 5 lb bot. lb.	.45	.50	.50	.45	.50	.45
Benzoate, 5 lb bot. . . . . lb.	1.50	1.75	1.75	1.50	1.75	1.50
Ethyl Butyrate, 5 lb bot. . . . lb.	1.80	2.00	2.00	1.80	2.00	1.80
Caproate, 1 lb bot. . . . . lb.	3.25	3.50	3.50	3.25	3.50	3.25
Cinnamate, 1 lb bot. . . . . lb.	4.00	4.50	4.50	4.00	4.50	4.00
Formate, 5 lb bot. . . . . lb.	1.00	1.25	1.25	1.00	1.25	1.00
Methyl Paracresol, 1 lb bot. . . . . lb.	3.25	3.50	3.50	3.25	3.50	3.25
Phenyl Acetate, 5 lb bot. . lb.	3.75	4.00	4.00	3.75	4.00	3.75
Valerate, 5 lb bot. . . . . lb.	...	3.75	3.75	3.75	3.75	3.75
Salicylate, 5 lb bot. . . . . lb.	1.95	2.00	2.00	1.95	2.00	1.95
Formic Ether see Ethyl Formate						
Geranyl Acetate, 1 lb bot. . . . lb.	3.00	3.05	3.25	3.00	3.25	3.20
Butyrate, 1 lb bot. . . . . lb.	13.00	13.50	13.50	13.00	13.50	13.00
Formate, 1 lb bot. . . . . lb.	12.00	12.50	12.50	12.00	12.50	12.00
Glyco Ester. . . . . lb.	1.00	1.10	1.10	.90	1.00	.90
Heliotropin, 100-10 lbs. . . . . lb.	1.65	1.75	1.75	1.65	1.75	1.65
Imported. . . . . lb.	1.95	2.05	2.05	1.95	2.05	1.95
Hydroxycitronellal, 1 lb. . . . . lb.	5.50	7.50	7.50	5.50	7.50	5.50
Indol, CP, 1 oz bot. . . . . oz.	2.90	3.00	3.00	2.90	3.00	2.90
IONONE, 1 lb bot 100%. . . lb.	5.00	6.00	6.00	5.00	6.00	5.00
Alpha. . . . . lb.	4.80	5.00	5.00	4.80	5.20	4.80
Beta. . . . . lb.	5.70	5.75	5.75	5.70	5.75	5.70
Methyl. . . . . lb.	5.75	6.00	6.00	5.75	6.00	5.75
Iso Borneol. . . . . lb.	2.25	2.35	2.35	2.15	2.25	2.15
Iso Bornyl Acetate. . . . . lb.	3.00	3.20	3.20	2.80	3.00	2.80
Iso-Butyl Benzoate, 5 lb bot. lb.	2.75	3.00	3.00	2.75	3.00	2.75
Iso-Safrol, 1 lb bot imp. . . . lb.	1.75	1.85	1.85	1.65	1.75	1.65
Domestic, 5 lb bot. . . . . lb.	3.50	3.75	3.75	3.50	3.75	3.50
Lynalyl Acetate, 1 lb bot. . . . lb.	3.50	4.50	4.50	3.25	4.25	3.25
Benzoate, 1 lb bot. . . . . lb.	13.00	14.00	14.00	13.00	14.00	13.00
Formate, 5 lb bot. . . . . lb.	10.50	12.00	12.00	10.50	12.00	10.50
METHYL ACETOPHENONE . . . . . lb.	3.35	3.50	3.50	3.35	3.50	3.35
Anthranilate, 1 lb bot. . . . . lb.	2.45	2.50	2.50	2.40	2.45	2.40
Imported. . . . . lb.	2.70	2.75	2.75	2.70	2.75	2.70
Anthranilic Acid. . . . . lb.	11.75	12.00	12.00	11.75	12.00	11.75
Benzoate, 5 lb bot imp. . . . lb.	1.75	1.85	1.85	1.75	1.85	1.75
Domestic, 5 lb bot. . . . . lb.	1.75	2.00	2.00	1.75	2.00	1.75
Cinnamate, 1 lb bot. . . . . lb.	3.75	4.25	4.25	3.75	4.25	3.75
Heptenone, 1 lb bot. . . . . lb	6.50	7.00	9.00	6.50	9.00	8.50
Paracresol, 1 lb bot. . . . . lb	4.50	8.00	8.00	4.50	8.00	4.50
Phenylacetate, 5 lb bot. . . lb	3.75	4.00	4.00	3.75	4.00	3.75
Salicylate, USP, 500 lb dr . lb.	...	.40	.40	.40	.40	.40
50 lb cases. . . . . lb.	...	.42	.42	.42	.42	.42
Mirbane rect. 1,000 lb drs. . . lb.	.12	.13	.13	.12	.13	.12
Musk Ambrette 1 lb cans. . . lb	7.25	7.50	7.50	6.50	6.75	6.50
Ketone 1 lb cans. . . . . lb	8.00	8.15	8.15	8.00	8.15	8.00
Xylene 5 lb cans. . . . . lb.	2.25	2.35	2.35	2.25	2.35	2.25
Nerolin 1 lb cans. . . . . lb.	1.35	1.40	1.40	1.35	1.40	1.35
Octyl Alcohol 1 lb bot. . . . . lb.	30.00	32.00	32.00	30.00	32.00	30.00
Oenanthic Ether lb bot. . . . . lb.	1.90	2.00	2.00	1.90	2.00	1.90
Paracresol Methyl Ether. . . . lb.	6.50	6.75	6.75	6.50	6.75	6.50
Paracresyl Acetate. . . . . lb.	5.50	5.75	5.75	5.50	5.75	5.50
Para Cymene Refd 110 gal dr . . . . . gal.	2.25	2.50	2.50	2.25	2.50	2.25
PHENYLACETALDEHYDE 50% 1 lb bot. . . . . lb.	4.75	5.00	5.00	4.75	5.00	4.75
Imported 50%. . . . . lb.	4.75	5.00	5.00	4.75	5.00	4.75
100%. . . . . lb.	8.00	8.25	8.25	8.00	8.25	8.00
Phenylacetic Ac'd 1 lb bot. . lb.	3.50	3.75	3.75	3.00	3.25	3.00
Phenyl Diacetate 1 oz bot. . . oz.	3.00	3.25	3.25	3.00	3.25	3.00
1 lb bot. . . . . lb.	8.00	10.00	10.00	8.00	10.00	8.00
Imported. . . . . lb.	7.00	7.75	7.75	7.00	7.75	7.00
Phenylethyl Alcohol 1 lb bot. lb.	4.50	4.75	4.75	4.50	4.75	4.50
Phenyl Ethyl Acetate. . . . . lb.	8.25	8.75	8.75	8.25	8.75	8.25
Butyrate 1 lb bot. . . . . lb.	15.00	16.00	16.00	15.00	16.00	15.00
Formate, 1 lb bot. . . . . lb.	19.00	21.00	21.00	19.00	21.00	19.00
Propionate, 1 lb bot. . . . . lb.	16.00	18.00	18.00	16.00	18.00	16.00
Valerate, 1 lb bot. . . . . lb.	19.00	20.00	20.00	19.00	20.00	19.00
Phenylpropylalcohol, 1 lb bot . . . . . lb.	12.00	12.50	12.50	12.00	12.50	12.00
Skatol, 1 oz bot. . . . . lb.	4.50	7.00	7.00	4.50	7.00	4.50
Terpinyl Acetate, 25 lb cans. . lb.	.90	.95	.95	.75	.80	.75
Imported, 25 lb cans.	.85	.90	.90	.85	.90	.85
TERPINEOL, CP, 1000 lb drs . . . . . lb.	.27	.29	.29	.27	.35	.27
50 lb cans. . . . . lb.	.31	.33	.33	.31	.39	.31
Absolute, 25 lb cans. . . . . lb.	.48	.50	.50	.48	.50	.48
Imported, 25 lb cans. . . lb.	.58	.60	.60	.58	.60	.58
Vanillin (Clove Oil), USP. lb.	6.25	6.80	6.80	6.25	7.00	6.00
(Guaiacol) USP. . . . . lb.	5.00	5.25	6.55	5.00	7.15	7.15



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{ Monthly Review }

Peppermint Appears Close to Bottom

Peppermint oil is weak being freely offered on spot at $2.15 to $2.45 per lb. for the natural and $2.50 and $2.75 for redistilled. These figures are now at levels lower than had been reached during the past eight years and should be attractive to buyers.

The primary market has been consistently easy for some time but there are now evidences of considerable manipulation in this oil. There are indications of a large short interest. With the normal resumption of consumer demand this short interest would naturally scurry to cover and the market as a whole take on a firmer tone.

Spearmint Declines Sharply

Spearmint is lower at $3.25 and $3.35 per lb., a decline during the past month of approximately 70c per lb. This is characteristic of the market here and in the middle west. Ample crop prospects and small consumer demand account for the revision in price.

Wormseed Advances Sharply

Wormseed has shown exceptional strength during the past month advancing to the high price of $3.75 and $4.25 per pound. This is a sudden jump of about 95c per lb. and is due to the adverse crop reports. There is considerable difference of opinion as to just how this crop will shape up, estimates putting it anywhere from 10% to 25% of normal.

Approximately 90,000 pounds of wormseed is consumed a year and there is about 40,000 pounds available at this writing so that there is every indication that a shortage will exist. Some dealers are loathe to part with their stocks at prevailing prices until such time as more definite information as to the general situation is available. There also seems to be an impression in some quarters that the upward revision in price has been too radical as the smaller crop will be offset to some extent by the general business depression. At any rate, the market will be firm to higher for the future months.

Azores Lavender Oil

Demand for lavender oil has been light and prices easier. Spanish oil has been marked down to 80c and 90c per lb. Production estimates would indicate that enough oil will be produced to care for world requirements.

The principal plants from which essential oil is obtained are various species of lavender and peppermint obtained in the vicinity of Ponta Delgado. Because this cultivation is still in the experimental stage, only about three acres are used at present.

As soon as a crop is obtained, it is distilled immediately. The oil is obtained by using the Micham process of distillation; forcing steam through the plants with subsequent rectification. The stalks, leaves, and flowers are all used for obtaining oil.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Valerianic Ether see Ethyl Valerate					
Yara Yara, 1 lb cans.....lb.	1.50	1.60	1.50	1.60	1.60

Essential Oils

Almond Bitter, USP, 5 lb bot lb.	2.75	2.85	2.85	2.75	.285	2.70
Bitter, ffPA, 5 lb bot.....lb.	2.85	2.95	2.95	2.85	3.10	2.85
Sweet, 56 lb cans.....lb.	.50	.53	.68	.50	.85	.65
Amber crude, 25 lb tins.....lb.	.20	.22	.35	.20	.35	.33
Rectified, 25 lb tins.....lb.	.52	.55	.55	.52	.55	.52
Angelica Root, 1 lb bot.....lb.	25.00	35.00	33.00	21.00	24.00	21.00
Anise Tech, 400 lb drums...lb.	.95	.97	1.15	.80	1.15	.55
USP, 60 lb cans.....lb.	1.05	1.06	1.16	.82	1.16	.58
Apricot Kernel, 50 lb cans...lb.	.34	.35	.39	.34	.46	.37
Bay, 25 lb tins N. F. V., 50.55% Phenol.....lb.	2.35	2.55	2.60	2.25	3.00	2.30
Terpeneless.....lb.	5.80	6.00	6.00	5.80	6.00	5.80
BERGAMOT, 25 lb coppers.lb.	2.40	2.50	3.70	2.40	5.35	3.25
Terpeneless.....lb.	14.00	18.00	18.00	14.00	18.00	14.00
Artificial, 25 lb cans.....lb.	2.00	2.75	3.25	2.00	3.25	2.50
Birch, Sweet, Northern, 25 lb tins.....lb.	2.25	2.75	4.00	2.25	4.00	3.75
Southern, 25 lb tins.....lb.	...	1.95	1.95	1.95	1.95	1.95
Birch Tar, rect., 5 lb bot.....lb.	.50	.55	.55	.50	.55	.50
Crude, 50 lb tins.....lb.	.12	.13	.13	.12	.13	.12
Bois de Rose, tins.....						
Brazillian.....lb.	1.05	1.20	1.60	1.05	1.70	1.55
Cayenne, tins.....lb.	1.65	1.75	2.00	1.65	2.35	1.90
Cade, 25 lb cans.....lb.	.25	.27	.27	.25	.27	.25
Cajuput, native, 50 lb tins..lb.	.75	.80	.80	.75	.88	.70
Calamus, 5 lb bot.....lb.	2.75	3.00	3.50	2.75	3.50	3.40
Camphor Sassa, 1000 lb drs..lb.	.22	.23	.30	.22	.36	.14½
White, 400 lb drs.....lb.	.23	.25	.40	.23	.40	.10½
Cans, 50 lbs.....lb.	.26	.27	.35	.26	.35	.14
CANANGA, Native 25 lb tins .....lb.	2.35	2.50	3.15	2.35	3.25	2.90
Rectified, 25 lb tins.....lb.	3.10	3.20	3.40	3.10	3.50	3.30
Caraway, USP.....lb.	1.65	1.80	1.95	1.65	2.00	1.65
Cardamon, NF, 1 lb bot.....lb.	24.00	37.00	39.00	24.00	29.00	25.00
Cascarilla, USP, 1 lb bot.....lb.	65.00	80.00	90.00	65.00	90.00	50.00
Cassia, ...	...	...	...	...	...	...
Redist, USP, 50 lb cans...lb.	1.25	1.30	1.45	1.25	2.10	1.40
Cedar Leaf, 50 lb tins.....lb.	1.05	1.10	1.10	1.05	1.10	.95
Cedar Wood, light, 1000 lb drs .....lb.	.39	.41	.45	.25	.28	.25
Celery, 1 lb bot.....lb.	...	7.50	7.75	7.50	7.75	7.75
Chaulmoogra, USP 80 lb cases lb.	...	1.50	1.50	1.50	1.50	1.20
Cinnamon Ceylon, 1 lb bot...lb.	9.50	13.00	13.00	9.50	13.00	9.50
Leaf, 5 lb bot.....lb.	1.85	1.95	1.95	1.85	1.95	1.60
CITRONELLA Ceylon, 1000 lb drs.....lb.	.53	.55	.63	.53	.61	.44
50 lb tins.....lb.	.59	.61	.64	.59	.62	.46
Java, 400 lb drs.....lb.	.64	.69	.82	.62	.91	.49
50 lb tins.....lb.	.66	.71	.84	.64	.93	.52
Cloves, USP, 50 lb cans.....lb.	1.75	1.80	2.20	1.75	2.90	2.20
6 lb bot.....lb.	2.20	2.25	1.65	.84	2.70	1.75
Copaiba.....lb.	....	.65	.65	.65	.80	.65
Coriander, USP, 10 lb bots..lb.	5.50	6.00	5.90	5.50	11.25	5.90
Croton USP, 25 lb tins.....lb.	5.50	5.75	5.00	3.00	3.15	.90
Cubebs, USP, 5 lb bot.....lb.	2.90	3.00	3.00	2.90	3.00	2.90
Cumin, 1 lb bot.....lb.	7.00	7.50	7.50	7.00	3.75	3.75
Dill, 25 lb cans.....lb.	3.75	5.75	5.75	3.75	3.85	3.75
Erigeron, 20 lb tins.....lb.	1.40	1.50	2.00	1.40	1.90	1.80
EUCALYPTUS Austl, USP, 56 lb cans, cases.....lb.	.44	.45	.52	.42	.60	.51
500 lb drs.....lb.	.41	.42	.51	.41	.59	.50
Fennel, USP, 25 lb tins.....lb.	.95	1.10	1.10	.80	.85	.80
Geranium African, 25 lb tins..lb.	4.15	4.25	5.40	4.15	5.40	3.85
Bourbon, 28 lb tins.....lb.	4.25	4.50	4.90	4.00	5.85	4.25
Turkish, 28 lb tins.....lb.	3.10	3.25	3.35	3.10	3.35	3.00
Ginger, 1 lb bot.....lb.	5.35	5.60	6.85	5.35	6.85	6.00
Gingergrass, 28 lb tins.....lb.	2.50	2.70	2.70	2.50	2.70	2.50
Hemlock, 25 lb tins.....lb.	1.05	1.10	1.10	1.05	1.10	1.05
Iuniper Berries, USP, 25 lb tins .....lb.	1.95	2.00	2.15	1.90	2.15	2.05
Wood, 50 lb tins.....lb.	.50	.60	.60	.50	.60	.50
LAVENDER, USP, 28 lb tins .....lb	2.40	2.55	3.40	2.40	3.40	3.25
Spike Spanish, 50 lb cans..lb.	.80	.90	1.10	.80	.95	.90
Lemon Ital, 25 lb cans.....lb.	1.25	1.50	3.40	1.25	5.75	2.75
California 35 lb cbys....lb.	1.05	1.25	2.25	1.05	4.65	2.05
Lemongrass, native, 50 lb cans .....lb.	.72	.74	.74	.72	.83	.81
Limes, expressed, 25 lb tins..lb.	16.25	19.25	22.50	16.25	28.00	19.50
Distilled, 25 lb tins.....lb.	7.25	7.50	8.75	7.25	9.75	7.75
Linaloe Mex., 70 lb cases....lb.	...	2.10	2.25	2.10	2.25	2.20
Mace, distilled, 50 lb tins....lb	1.60	1.65	1.80	1.60	1.80	1.75
Mandarin, 25 lb cases.....lb.	5.50	6.00	9.25	5.50	11.50	8.75
Mirbane, ref Aromatic Chemicals.....						
MUSTARD, USP, 1 lb bots.lb.	9.50	10.00	10.00	9.50	10.00	9.50
Artif, USP, 5 lb bot.....lb.	1.60	1.70	1.70	1.60	1.70	1.60
Neroli Bigarade, ¼ & ½ & 1 lb bot .....lb.	125.00	250.00	325.00	125.00	325.00	75.00
Petale, 1 lb bot.....lb.	160.00	170.00	170.00	150.00	170.00	160.00
Artificial, 1 lb bot.....lb.	5.00	15.00	15.00	5.00	15.00	5.00
Nutmeg, USP, 50 lb tins....lb	1.35	1.40	1.80	1.35	1.80	1.75
ORANGE BITTER, 25 lb tins .....lb	2.90	3.15	3.75	2.90	6.75	3.50
Sweet W Ind, 25 lb tins..lb	2.60	2.85	3.35	2.60	6.50	3.10
Italian, 25 lb cop.....lb	2.50	2.80	4.00	2.50	7.35	3.35

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{ Monthly Review }

Algerian Geranium Position

An average crop of Algerian geranium plants will yield about 135,000 pounds of geranium oil per year practically all of which is exported.

There is given below a table showing the exports of Algerian geranium oil for the year 1927. Detailed statistical information for subsequent years is not as yet available:

Country	Kilos	Value
France	36,670)	$212,680
Great Britain	3,625)	
Germany	2,410)	
Netherlands	1,000)	
Japan	2,140)	292,160
United States	40,359)	
Other countries	840)	
Total	87,044	504,840

It will be noticed that the United States was the largest purchaser of Algerian geranium oil.

Each producer and shipper has his own type of geranium oil. In general all Algerian geranium oil is similar and prices for various types do not vary considerably. The recent low and high prices were 135 francs per kilo in 1927 and 260 francs early in 1930 or about $2.45 and $4.73 per pound.

On June 30, 1930, the average export selling price of Algerian geranium oil was 185 francs per kilo (about $3.36 per pound). It is stated that the cost of packing amounts to about 1 franc per kilo (about $0.018 per pound). Transportation to the wharfs in Algiers and ocean freight to New York amount to about 62 francs per drum of 200 kilos (about one-half cent per pound.)

Competent merchants state that the minimum export selling price at which producers and intermediaries make a fair profit is 160 francs per kilo (about $2.91 per pound). When lower prices are obtained, the tendency is to stop cultivation and thereby production. (Consul Oscar S. Heizer, Algiers.)

Geranium is reported as more competitive although quotations have not been revised officially. The undertone is easy in that some business has been accepted below prevailing schedules.

Demand for cedarwood oil has been off to such an extent that the prices have eased somewhat in spite of the fact that production is practically nil. This oil can be obtained at prices ranging from 39c to 41c per lb. Stocks in dealers' hands are low but seem ample for the small consuming demand.

Anise is strong, prices being marked up to 95c and 97c per lb. Difficulty is still being experienced in obtaining regular shipments from China so that buying by dealers on spot to replenish their supplies has put this oil in a strong position. This has undoubtedly brought additional strength to the Chinese market.

Bulgarian rose remains unchanged in price although the cost of production is higher. Quotations on spot have been steady with the possibility of higher prices should demand, which has been slack, pick up.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Orange American, Cold pressed 25 lb tins ..... lb.	2.80	2.95	3.75	2.80	7.40	3.50
Distilled, 25 lb tins..... lb.	1.50	1.55	2.15	1.50	5.25	2.05
Spanish, 25 lb tins..... lb.	2.85	2.95	4.00	2.85	7.15	3.85
Oil Orris, concrete..... oz.	6.00	6.25	6.25	6.00	6.25	2.50
Origanum, 50 lb cans tech... lb.	.25	.27	.30	.25	.30	.28
Parsley, 1 lb bot..... lb.	9.00	9.25	9.25	9.00	9.25	8.00
Patchouli, 5 lb bot..... lb.	6.40	6.65	8.50	6.40	8.75	6.75
Pennyroyal, dom, 25 lb tins.. lb.	1.55	2.10	2.10	1.55	2.10	1.55
Imported, 25 lb tins..... lb.	...	1.15	1.20	1.10	1.20	1.20
Pepper Black lb.....	10.25	...	10.25	10.25	...	...
Peppermint, nat. 60 lb cases lb.	2.15	2.45	3.45	2.15	4.05	2.85
Redis, USP, 60 lb cs..... lb.	2.50	2.75	3.65	2.50	4.30	3.10
Petit Grain S A., 25 lb tins.. lb.	1.50	1.60	2.05	1.50	2.05	1.90
French, 1 lb bot..... lb.	6.25	6.50	6.50	6.25	6.50	6.35
Italian, 25 lb tins..... lb.	2.20	2.30	2.30	2.20	2.30	2.20
Pimento, 25 lb tins..... lb.	2.10	2.25	2.75	2.10	2.75	2.25
Pineedle Siberian, cans..... lb.	.70	.75	.75	.70	.75	.60
Pinus, Sylvestris, 25 lb tins.. lb.	1.90	2.00	2.00	1.90	2.00	1.90
Pumilio, USP, 25 lb tins... lb.	2.45	2.55	2.95	2.45	2.95	2.85
Rose Fr, 8, 16, & 32 oz pkgs.. lb.	14.00	17.00	17.00	14.00	17.00	12.00
Bulg, 8, 10 & 32 oz pkgs... lb.	14.00	16.00	16.00	14.00	14.50	11.50
Rosemary, USP, 27½ lb tins.. lb.	...	.51	.56	.51	.56	.47½
1000 lb drums..... lb.	...	.50	.50	.50	.50	.42½
Tech, 25½ lb tins..... lb.	...	.40	.40	.40	.40	.40
Rue, 1 lb bot..... lb.	3.00	3.10	3.25	3.00	3.25	3.15
SANDALWOOD, E Ind ,USP, 100 lb case..... lb.	8.25	8.50	9.85	8.25	9.85	7.45
W Indian (Amayris), 25 lb tins..... lb.	2.85	2.95	2.95	2.85	2.95	2.25
Australian, Tins.....	5.65	5.65	5.65			
Sassafras, USP, 50 lb cans... lb.	1.30	1.32	1.32	1.30	1.32	.78
Artificial, 1000 lb drs, 60 lb cans..... lb.	.30	.32	.36	.30	.40	.26
Safrol, cans..... lb.	.36	.38	.43	.36	.48	.28
Savin, 50 lb tins..... lb.	2.50	2.75	2.75	2.30	2.75	1.65
SPEARMINT, USP, 50 lb tins ..... lb	3.25	3.35	4.70	3.25	4.70	4.05
Spruce, 50 lb tins..... lb	.95	1.00	1.10	.95	1.10	1.05
Tansy, American, 25 lb tins.. lb.	3.50	3.75	4.00	3.50	4.00	3.75
Tar, 50 gal bbls..... lb.	.25	.30	.30	.25	.30	.25
USP, 50 gal bbls..... lb.	.75	1.50	1.50	.75	1.50	.75
Thyme, red, NF, 25 lb tins.. lb.	.75	.77	.80	.75	.90	.78
White, NF, 25 lb tins..... lb.	.83	.85	.85	.83	.90	.83
Tech, 110 lb drums..... lb.	.60	.70	.70	.60	.70	.60
Turpentine, USP, rect cbys.. lb.	.27	.30	.30	.27	.30	.27
Vetivert Bourbon, 10 bot.... lb.	6.25	6.50	6.50	6.25	6.50	6.25
Indian, 1 lb bot..... lb.	25.00	38.00	38.00	25.00	38.00	25.00
Java, 1 lb bot..... lb.	15.00	16.00	16.00	15.00	16.00	15.00
Wine, heavy, 1 lb bot..... lb.	1.65	1.75	1.75	1.65	1.75	1.65
WINTERGREEN Gaultheria, true, 25 lb tin..... lb.	8.00	10.00	10.00	8.00	10.00	8.00
Southern, 25 lb tins..... lb.	3.75	4.00	4.00	3.75	4.00	3.75
Synthetic see Methyl salicylate.....						
Wormwood, dom, 25 lb tins.. lb.	7.00	7.25	17.25	7.00	35.00	13.25
Wormseed, Balt, 25 lb tins.. lb.	3.75	4.25	4.25	2.80	3.65	1.80
Ylang Ylang Bourbon, 10 lb tins No. 1..... lb.	9.00	9.25	9.25	9.00	9.75	9.25
10 lb tins No. 2.. ... lb.	8.20	8.25	8.50	8.20	8.50	8.25
Manila, 1 lb bot..... lb.	30.00	40.00	40.00	30.00	40.00	30.00

Oleoresins

Aspidum, USP, bot and tins.. lb.	...	1.25	1.25	1.25	1.45	1.25
Capsicum, USP, bot and tins.lb	3.50	4.25	4.25	3.50	4.25	3.50
Cubeb, USP, bot and tins.... lb.	3.00	3.25	2.25	3.00	3.25	3.00
Ginger bot and tins..... lb.	2.85	3.35	3.35	2.85	3.35	2.85
Malefern see Aspidum.....						
Orris, bot & tins..... lb.	15.00	18.00	18.00	15.00	18.00	15.00
Pepper, black, USP, bot & tin ..... lb.	...	9.50	9.50	9.50	9.50	9.50
Vanilla, bot & tins..... lb.	8.00	8.75	8.75	8.00	8.75	8.00

Perfumer's Sundries

Almond Meal, 25 lb cans.... lb.	.20	.21	.21	.20	.21	.20
Amber liquid, 400 lb drs..... lb.	2.20	2.30	2.30	2.20	2.30	2.20
Ambergris, Black, boxes..... oz.	14.00	15.00	15.00	14.00	15.00	14.00
Gray boxes..... oz.	32.00	36.00	36.00	32.00	36.00	32.00
BALSAM COPAIBA Para, 80 lb cases..... lb.	...	.25	.33⅓	.25	.34	.30
South American, USP, 80 lb cases..... lb.	...	.26	.37	.26	.37	.37
Peru, 120 lb cases..... lb.	1.65	2.00	2.00	1.65	2.05	1.75
Tolu, 90 lb cases..... lb.	1.25	1.30	1.30	1.25	1.30	1.15
Benzoin Gum, Siam, boxes... lb.	1.20	1.30	1.30	1.20	1.30	1.20
Castoreum, 1 lb bot..... lb.	20.00	22.00	22.00	9.50	10.00	9.50
Chalk, Precip, 1 gt 175 bbls. lb.	.04½	.05	.05	.04½	.05	.04½
Cherry Laurel Water, 24 ltr cby ..... lb.	4.10	4.60	4.60	4.10	4.60	4.10
Civet, Abyssin, horns..... oz.	2.10	3.00	3.00	2.10	3.00	2.10
Labdanum, 5 lb bot..... lb.	5.50	6.00	6.00	5.50	6.00	5.50
Musk Pods Cabardine, tins.. lb.	...	...	...	...	...	...
Musk Tonquin, tins, Pods... oz.	24.00	26.00	26.00	24.00	26.00	24.00
Grains Cabardine, tins.... oz.	...	...	...	...	...	...
Tonquin, tins, Grained.. oz.	28.00	34.00	34.00	28.00	34.00	28.00
Synthetic See Aromatic Chemical.....						
Rice Starch, 140 lb bags.... lb.	.09	.10	.10	.09	.10	.09
Rose Water, 24 ltr cbys.. cby.	5.00	5.50	5.50	5.00	5.50	5.00
Sandalwood, pwd bags..... lb.	.22½	.40	.40	.22½	.40	.22½
Saponin, 5 lb tins..... lb.	1.15	1.30	1.30	1.15	1.30	1.15
Talc, Italian, 220 lb bags...ton.	60.00	80.00	80.00	60.00	80.00	60.00
French, 220 lb bags.....ton.	40.00	45.00	45.00	40.00	45.00	40.00

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Monthly Review

Gum Arabic Supply Short

Boxall & Co., in their report covering the market July 1 to July 31, state that the arrivals in Kordofan stations (El Obeid, Nahud, and El Odaiya only, all other stations having completely given out) amounted during July to 878 tons, showing a great decline as against the preceding month. July arrivals compare with other years as follows:

	1923	1924	1925	1926	1927	1928	1929	1930
Tons:	1,100	888	1,151	1,472	712	495	171	878

Total new crop arrivals to date compare with previous seasons as follows:—

	1923	1924	1925	1926	1927	1928	1929	1930
Tons:	13,672	13,566	10,904	13,930	13,005	15,744	10,855	12,670

Prices at El Obeid experienced daily fluctuations during the month, but the general tendency has been downward. The price paid on July 1 was 6d. down as against the closing price of June 30. Prices continued to fall up to July 16, the fall amounting to 9s. 9d. From July 17 to July 27 prices took an upward move, the rise amounting to 6s., but during the last four days of the month they suddenly fell again 5s. 3d. The net fall during the month was, therefore, 9s. 6d. per cwt.

Demand has been generally very slack. During the last week of the month when prices fell again demand somewhat revived both from the Continent and the U. S. A.

Market Position.—The market during the whole month has been very uncertain. During the first fourteen days of the month arrivals were good, but for the following thirteen days they were very small. It seemed that arrivals were falling off, but on the contrary during the last four days of the month they increased considerably. It is noticeable that while arrivals were good, prices were gradually falling, whereas they were rising when arrivals were very small.

Talha.—Prices declined during the month 1s. 6d. per cwt., overseas demand being insignificant.

The exports from January to June, 1930, compared with the corresponding period of 1929, were as follows:—

	1929			1930		
Destination	Jan.-May	June	Total	Jan.-May	June	Total
Great Britain	2,229	163	2,392	2,413	304	2,717
U. S. A.	2,778	553	3,331	2,155	278	2,433
France	1,784	289	2,073	1,796	393	2,189
Germany	1,978	461	2,439	1,719	298	2,017
Italy	690	88	778	686	172	858
Belgium	754	35	789	776	59	835
Japan	373	—	373	414	13	427
Spain	187	—	187	159	29	188
Holland	281	36	317	280	55	335
Denmark	14	1	15	9	—	9
Norway & Sweden	77	—	77	166	32	198
Egypt	49	—	49	50	15	65
Australia and N. Z.	272	33	305	317	48	365
China	144	—	144	189	—	189
Canada	15	—	15	37	—	37
Argentine	46	—	46	13	10	23
Brazil	12	13	25	17	12	29
Uruguay	5	2	7	—	—	—
Finland	27	—	27	19	—	19
British India	84	—	84	13	—	13
Other countries in America	21	—	21	30	1	31
Other countries	33	—	33	30	8	38
Total tons	11,853	1,674	13,527	11,288	1,727	13,015

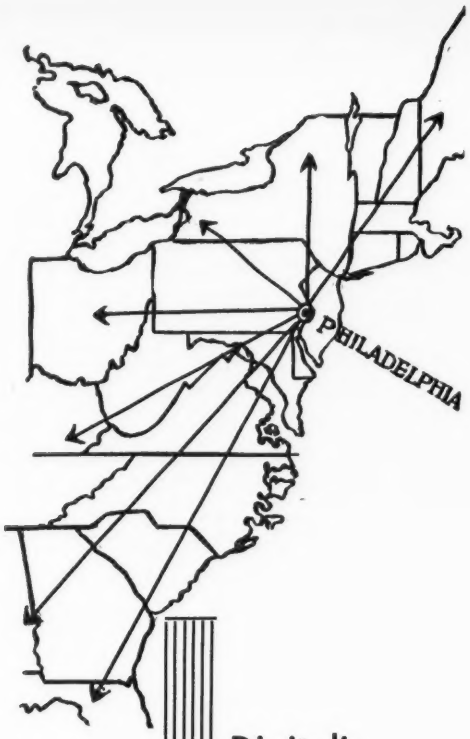
The export figures are made up of the following qualities:

		Hashab	Bleached	Talha	Total
January-June, 1929	Tons	11,258	45	2,224	13,527
January-June, 1930	Tons	11,208	20	1,787	13,015
Difference in 1930	Tons	—50	—25	—437	—512

—"Chemist & Druggist."

Drugs and Spices

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Aconite Root, USP, bags lb.	.15	.16	.19	.15	.21	.18
Agar Agar, No. 1, bales lb.	1.26	1.27				
Agar Agar No. 2, bales lb.	1.18	1.20	1.45	1.40	1.45	1.40
Almonds Meal lb.	.19	.20	.20	.19	.30	.15
Aletris Root, bags lb.	.30	.31	.37	.30	.38	.35
Alkanet Root, bags lb	.11	.12	.14	.11	.15	.11
ALOES, Cape, 400 lb cases lb.	.13	.14	.21	.13	.18	.14
Curacao, 100 lb cases lb.	.25	.27	.27	.25	.27	.19
Socotrine, Whole, 300 lb cs lb.	.35	.40	.50	.35	.50	.35
Althea Root, bags lb.	.20	.22	.22	.20	.22	.20
Cut cases lb.	.25	.32	.37	.25	.40	.30
Angelica Root, bags lb.	.18	.19	.22	.18	.28	.21
Angostura Bark, bags lb	.20	.23	.25	.20	.26	.19
Anise Star case lb	.11	.11½	.11½	.09½	.19	.11
Spanish, bags: lb	.11	.11½	.14½	.11	.19	.13½
ARABIC GUM, White, No. 1, 220 lb bags lb.	.44	.45	.45	.35	.38	.22
Seconds, 220 lb bags lb.	.42	.43	.43	.33	.36	.16
Sorts, Amber, 220 lb bags lb.	.14½	.15	.27	.14½	.32	.11
Powd, USP, 300 lb bbls lb.	.21	.24	.32	.21	.35	.17½
Areca Nuts, 100 lb bbls lb.	.08	.10	.20	.08	.14	.10
Powd, 100 lb bbls lb.	.14	.16	.27	.14	.27	.14
Arnica Flowers, bales lb.	.16	.18	.35	.16	1.00	.34
Root, bags lb.	.42	.43	.46	.42	.46	.35
Arrowroot, St. Vincent, powd bbls lb.	.08	.09	.10½	.08	.10½	.10
Asafoetida, 250 lb cases lb.	.21	.22	.27	.21	.29	.23
Powd, 50 lb boxes lb.	.36	.37	.50	.36	.54	.46
Balm Gilead Buds, bags lb.	.35	.40	.40	.35	.40	.35
Balmony Herbs, bales lb.	.23	.25	.25	.23	.25	.18
Barberry Bark, of root, bags lb.	.18	.20	.20	.18	.20	.18
Bayberry Bark, bales lb.	.10	.11	.12	.10	.13	.10
Wax bbls lb.	.29	.32	.32	.29	.32	.29
BELLADONNA LEAVES, bale lb.	.14½	.16½	.20	.14½	.20	.17
Root, bags lb.	.15	.16	.19	.15	.21	.18
Bees Wax, White, cases lb.	.48	.52	.60	.48	.60	.55
Yellow refined cases lb.	.34	.40	.42	.34	.42	.41
Berberis Aquafolium Root, bags lb.	.09	.10	.10	.09	.12	.09
Beth Root, bags lb.	.13	.14	.17	.13	.18	.16
Black Indian Hemp Root, 100 lb bags lb.	.17	.18	.19	.17	.19	.18
Blood Root, bags lb.	.15	.15½	.18½	.15	.18½	.17½
Blueflag Root, bags lb.	.15	.18	.21	.15	.21	.18
Boldo Leaves, bales lb.	.15	.17	.17	.15	.17	.15
Boneset Herb, bales lb.	.10	.11	.12	.10	.12	.10
Borage Flowers, bales lb.	.15	.16	.16	.15	.15	.14½
Broomtop Herb Cut, bales lb.	.08	.09	.11	.08	.11	.10
Bryonia Root, bags lb.	.10	.11	.12	.10	.12	.11
BUCHU LEAVES Short, 250 lb. bales lb.	.24	.26	.40	.24	.47	.36
Long bales lb.	.75	.80	.80	.75	.80	.75
Buckbean Leaves, bales lb.	.08	.09	.09	.08	.10	.08
Buckthorn Bark, bags lb.	.05½	.06	.07½	.05	.05½	.05
Berries, bags lb.	.30	.35	.45	.30	.50	.40
Burdock Root, bags lb.	.10	.11	.18	.10	.18	.13
Seed bags lb.	.40	...	.40	.40	.65	.40
Burgundy Pitch, 110 stand gross for net lb.	.08	.09	.09	.08	.09	.08
Imported lb.	.11	.12	.12	.11	.13	.11
Calabar Beans, bags lb.	.20	.21	.26	.20	.26	.22
Calamus Root, blchd cases lb.	.40	.45	.50	.40	.52	.45
Unbleached, bags lb.	.06½	.08	.08	.06½	.08	.06½
Calendula Petals, imp bales lb.	.50	.55	1.05	.50	1.70	.95
Calisaya Bark, bales lb.	.19	.20	.20	.19	.22	.19
Powdered, bbls lb.	.24	.25	.25	.24	.27	.24
Canary Seed, South America, bags lb.	.07½	.08	.08	.05½	.07½	.05
Dutch, bags lb.	.06¼	.06½	.06½	.05½	.06¼	.05¼
Candelilla Wax, bags lb.	.27	.28	.28	.27	.28	.27
Cannella Alba Bark, bales lb.	.30	.31	.31	.30	.31	.28
Cannabis, U.S.P. lb	.25	.32	.32	.23	.33	.22
Cantharides, Chinese, cases lb.	.35	.40	.47	.35	.55	.42
Powdered, boxes lb.	.58	.60	.65	.58	.80	.63
Russian, cases lb.	.48	.53	.55	.48	.55	.50
Powdered, boxes lb.	.58	.60	.64	.58	.75	.65
Caraway Seed, African, bags lb.	.05	.06	.06	.05	.06	.05
Dutch, 11 lb bags lb.	.10	.10½	.10½	.10	.12	.09½
Cardamon bleached, cases lb.	1.25	1.35	1.55	1.25	1.75	1.45
Decorticated, cases lb.	.96	1.00	1.40	.96	1.60	1.35
Cascara Amarga, 150 lb bbls lb.	Nom	...	...	...	...	...
So called bales lb.	.60	.85	.85	.60	.85	.60
CASCARA SAGRADA, 1928 bark lb.	.17	.18	.18	.16	.18	.15
1929 bark lb.	.16½	.18	.18	.15	.16	.14
1930 bark lb.	.14	.15	.16	.14	.15	.13
Cascarilla Bark, quills, bales lb.	.80	.90	1.00	.80	1.00	.90
Siftings, bbls lb.	.65	...	.65	.65	.65	.65
Cassia Batavia No. 1 bbls lb.	.09	.09½	.14	.09	.15	.13½
Shortstick, bales lb.	.08	.08½	.11	.08	.12½	.10½
Batavia No. 3, bales lb.	.07	.07¼	.09½	.07	.11	.09½
China Select Rolls, cases lb.	.03¾	.04	.07¼	.03¾	.09	.08½
Broken, bales lb.	.05½	.05¾	.10	.05½	.10	.09½
Saigon, thin lb.	.22	.23	.31	.22	.39	.28
Buds, cases lb.	.12	.13	.26	.12	.28½	.16½
Fistula, baskets lb.	.08	.09	.12	.08	.13	.10
Catnip, Herb, bales lb.	.19	.20	.20	.19	.23	.18
Celery Seed, bales lb.	.16½	.16½	.17¾	.16½	.19	.16¾
Ceresin Wax, White, bags lb.	.15	.20	.20	.15	.20	.15
Yellow 200 lb. bags lb.	.11	.14	.14	.11	.14	.11
Imp. 100 lb. bags lb.	.25	.38	.38	.25	.38	.25



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Picking, drying, packing and storing Digitalis materially affects its value from a pharmacological viewpoint. Selecting and handling Digitalis to preserve these qualities has long been a specialty of McIlvaine Brothers, Inc.

Buchu --

Buchu leaves must be carefully selected to avoid excess stems and admixture of other species. Our regular representative in the Union of South Africa carefully selects and grades each lot.

Licorice --

Licorice Root is a specialty of McIlvaine Brothers, Inc. Our superior grade of cuttings is free from mouldy products, old woody fragments, is clean and low in ash.

Squill --

Our supplies from Sicily of Squill Root are carefully cured and graded. Constant quality and supply assured.

Belladonna --

Rigid routine, in gathering and drying Belladonna leaves to secure highest alkaloidal content, is carried on under constant supervision of representatives of McIlvaine Brothers, Inc.

Rhubarb --

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{ Monthly Review }

Gum Arabic Weak

Gum arabic has again been depressed and is now freely offered at 14½c and 15c per pound. The seeming inability of the primary source of supply to finance the large arrivals there together with the depression in the various markets of the world, principally the United States, has caused the gum to be offered at lower prices for shipment. This lower cost has been checked off the spot market.

Senega Advances Sharply

Senega root has advanced very sharply and to-day is priced at 80c @ 85c per pound with very little material actually to be had.

The present condition in the market is the result of disinterest on the part of buyers and resulting very low prices. The settling of prices to very low levels caused the Indian gatherers in Canada to refuse to bother with senega. Importers here did not bother about the item since there had been a large over-supply around for some time and there appeared to be no difficulty in obtaining supplies when they were needed.

Finally the consumers really needed senega in a large way. When the floating supplies were taken by consumers, importers went to the primary sources for more material with the result that there is little to be had. It does take much imagination to realize what happened as soon as the true condition was realized.

It appears that the present high market will continue for some time due to the manner in which senega is collected. The Canadian Indians gather senega root in their spare time and there is no concerted effort to gather the root as a major occupation. Of course there is always the likelihood that high values might furnish an impetus to more actively gather the root, but it is questionable whether the present values are high enough to bring this about. At any rate it appears certain that consumers will have to pay well for senega for some little time to come.

Chamomile flowers, Hungarian, continue at prevailing levels of 10c and 17c per lb. on spot, with shipment offered at 11c @ 12c although it is reported that these prices could be shaded on firm business. Roman flowers have been reduced during the past month to 65c and 70c per lb. There is still some uncertainty as to the crop in Belgium but as crop is now due it has had the tendency to cause an easier tone.

Orris root is firm in the primary as stocks of new crop show only a conservative gain. This commodity, it must be remembered, is under government regulation so that any exceptionally large crops are not likely and prices now remain more or less staple. No tendency to lower quotations on the spot has been noticed although business is in but small lots.

Belladonna root is competitive with a buyers market prevailing. Pressure to sell has been noticeable due to the fact that demand has been very small.

	Current Market		1930 High	1930 Low	1929 High	1929 Low
CHAMOMILE FLOWERS						
Roman, bales lb.	.65	.70	.80	.65	.80	.40
Hungarian, cases lb.	.16	.17	.22	.16	.26	.20
Charcoal Willow, powd, bbls lb.	.06	.06½	.06½	.06	.06½	.06
Wood, powd, bbls lb.	.04	.05	.05	.04	.05	.04
Chestnut Bark lb.	.07	.08	.08	.07	.08	.07
Leaves bales lb.	.05	.05½	.05½	.05	.05½	.05
Chicle Gum, lb bbls lb.	.58	.75	.75	.58	.75	.58
Chiretta, bales lb.	.14	.17	.28	.14	.30	.26
Cinnamon, Ceylon, No. 1, bales lb.	.34	.35	.35	.34	.62	.34
No. 2 bales lb.	.16½	.17	.34	.16½	.51	.32
No. 3 bales lb.	.55½	.56	.56	.55½	.56	.55½
Clover Tops, Red, bags lb.	.10	.11	.11	.10	.14	.10
Cloves Zanzibar, 135 lb bbl lb.	.29	.30	.30	.22	.38	.23½
Cochineal, Black lb.	.69	...	.69	.69	.69	.69
Silver lb.	.85	...	.85	.85	.85	.85
Cohosh Root, Black, bags lb.	.07	.08	.09	.07	.09	.07½
Blue, bags lb.	.08	.09	.11	.08	.12	.10
Colchicum Root, bags lb.	.08	.09	.11	.08	.11	.07
Seed, bags lb.	.95	1.00	1.00	.95	1.00	.65
COLOMBO ROOT, bags lb.	.08	.08½	.12	.08	.20	.11
Colocynth Pulp, bales lb.	.20	.21	.27	.20	.45	.29
Coltsfoot Leaves, bags lb.	.08	.09	.09	.08	.09	.08
Comfrey Root, bags lb.	.10	.11	.11	.11	.14	.11
Condurango Bark, bags lb.	.13	.14	.16	.13	.17	.15
Coriander Seed, Morocco, bags lb.	.02¾	.02⅞	.03⅛	.02¾	.06	.03
Bleached, bags lb.	.06½	.07	.08	.06½	.11½	.07½
Corn Silk, bales lb.	.06	.07	.07	.05½	.06½	.05½
Cotton Root Bark, bales lb.	.10	.11	.14	.10	.15	.12
Cowhage, 1 oz tins lb.	1.00	...	1.00	1.00	1.00	1.00
Cramp Bark so called bales lb.	.06½	.07	.07	.06½	.08	.06
True, bags lb.	.30	.35	.40	.30	.48	.35
Cranesbill Root, bags lb.	.10	...	.10	.10	.10	.10
CUBEB BERRIES, XX bags lb.	.40	.42	.53	.40	.53	.48
Powdered, boxes lb	.45	.46	.55	.45	.55	.50
Culvers Root, bags lb.	.16	.17	.19	.16	.20	.18
Cumin Seed, Malta, bags lb.	.13¼	.13¾	.13¼	.13¼	.13¾	.12
Morocco, bags lb.	.12⅝	.13	.16	.12⅝	.16	.12
Cuttlefish, Bone Trieste, Straps lb.	.22	.24	.25	.22	.25	.14
French, boxes lb.	.22	.23	.23	.22	.23	.12½
Powdered, bbls lb.	.09	.10	.10	.09	.10	.09
Broken, bales lb.	.07	...	.07	.07	.07	.05
Damiana Leaves, bales lb.	.15	.16	.18	.15	.18	.16
Dandelion Root, Imp. bags lb.	.22	.24	.27	.22	.29	.19
Deer Tongue Leaves, bales lb.	.11	.13	.13	.11	.13	.11
Digitalis Leaves, bales lb.	.17	.18	.28	.17	.70	.26
Dogwood Bark, Jamaica bags lb.	.08	.09	.10	.08	.11	.09
American bales lb.	.06½	...	.06½	.06½	.06½	.06½
Doggrass Root, USP, cut bags lb.	.12	.13	.13	.12	.13	.10
Dragons Blood Mass, cases lb.	.65	.70	.70	.65	.70	.65
Reeds, boxes lb.	...	1.20	4.00	1.20	4.00	.90
Echinacea Root, bags lb.	.23	.25	.25	.23	.28	.23
Elcampane Root, bags lb.	.08	.09	.09	.08	.09	.08
Elder Flowers, bags lb.	.25	.30	.55	.25	.55	.22
Elemi Gum, 85 lb cases lb.	.26	.28	.28	.26	.28	.26
Elm Bark, bundles lb.	.26	.27	.40	.26	.40	.25
Grinding bags lb.	.13½	.14	.14	.13½	.14	.13½
Powdered, bbls lb.	.18	.19	.22	.18	.22	.19
Ephedra Vulgaris, bales lb.	.09	.10	.10	.09	.16	.09
ERGOT, 150-200 lb bags lb.	.50	.55	.65	.50	.95	.60
Eucalyptus Leaves, bales lb.	.05½	.06½	.09	.05½	.11	.07
Euphorbia Pilulifera, Herb, bags lb	.05½	.06½	.07½	.05½	.11	.06½
Euphorbium Gum, cases lb.	.14	.20	.20	.14	.20	.14
Fennel Seed, French, bags lb.	.10	.10½	.14½	.10	.18½	.14
German bags lb.	.12½	.14½	.19	.12½	.27	.17
Foenugreek Seed, 200 lb bags lb.	.04¾	.05½	.06½	.04¾	.06½	.05
Fish Berries, 100-125 lb bag lb.	.06	.07½	.07½	.06	.07½	.06
Flax Seed, Whole 182 lb bbls.	14.50	15.25	17.00	14.50	17.00	14.00
Ground, 180 lb bbls lb.	.08	.08½	.09½	.08	.09½	.08
Flea Seeds Black bags lb.	.60	.65	.80	.32	.35	.20
Fringe Tree Bark or Root bags lb.	.19	.21	.26	.19	.24	.19
Fumigating Pastiles, boxes lb.	.30	.35	.35	.30	.35	.30
Galangal Root, bags lb.	.08	.09	.15	.08	.15	.14
Galbanum Gum, cans lb.	.95	1.05	1.05	.95	1.25	.95
Gamboge Gum, 100 lb cases lb.	.90	.95	1.15	.95	1.25	1.10
Powdered, cases lb.	..	1.10	1.25	1.10	1.40	1.20
Gelsemium Root, bags lb.	.07½	.08½	.10	.07½	.12	.09
GENTIAN ROOT, bags lb.	.08	.09	.10	.08	.11	.09
Ground bbls, boxes lb.	.13	.14	.14	.13	.14	.13
Powdered, bbls, boxes lb.	.13	.14	.14	.13	.14	.13
Ginger, African, bags lb.	.08¾	.09	.17½	.08¾	.17½	.13
Jamaica Grinding bags lb.	.11	.11½	.21½	.11	.20	.18
Cochin ABC & Lemon, bags lb.	.12	.12½	.18½	.12	.18½	.17
Ginseng Root, cultivated cs lb.	8.00	10.00	10.00	8.00	10.00	8.00
Wild Southern, cases lb.	...	16.00	16.00	16.00	16.00	16.00
Golden Seal Root, bags lb.	1.80	2.00	2.80	1.80	3.80	2.70
Powdered, boxes lb.	2.35	2.45	3.15	2.35	4.35	3.25
Herb, barrels lb.	1.25	1.30	1.30	1.25	1.30	1.25
Grains of Paradise, bags lb.	.18	.23	.40	.18	.85	.30
Grindelia Robusta, Herb, bale lb.	.08½	.09½	.11	.08½	.12	.09
Guaiac Gum, 150 lb cases lb.	.30	.31	.35	.30	.38	.33
Strained 75 lb cases lb.	.70	.75	.75	.70	.75	.70
Guarana, tin cases lb.	1.50	1.75	3.00	1.50	3.00	2.50
Hellebore Root, Black, bbls lb.	.05½	.06	.06	.05½	.06	.05½
White, 250 lb bbls lb.	.07¾	.08½	.08½	.07¾	.08½	.07¾
Powdered lb.	.11	.12	.12	.11	.12	.11
Helonias Root, bags lb.	.52	.54	.65	.52	.72	.62
Hemp Seed, bags lb.	.03¼	.03¼	.06	.03¼	.06	.05
Henbane Leaves, USP, bales lb.	.13	.14	.17	.13	.20	.15

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Psyllium Lower for Import

Psyllium seed is still in a position where it cannot be definitely qualified. We would put the price nominally at from 60c to 65c per lb. Prices for shipment are about from 18c to 20c per lb. This is 2c per pound lower than prevailing shipment price a month ago and would certainly warrant a considerably lower price for psyllium when the new crop is offered in the spot market.

French psyllium seed was recently quoted at $25 per 100 pounds c. i. f. New York gross for net packed in double jute bags, says Acting Commercial Attache D. J. Reagan, Paris. A large crop is expected this year due to unusually large plantings, but it is believed that the harvest will be retarded by continued rains. Stocks available are small and said to equal approximately thirty tons.

On July 15, the stocks of psyllium seed remaining in France from the 1929 crops were practically nil and the total carry-over was estimated at not more than 30 or 40 tons. The prospects are that the 1930 crop will be rather large, but it is impossible to estimate the amount. The plantings were much larger than last year, or, in fact, larger than any normal year. This larger planting is probably due to the higher price tendency for psyllium seed of last season.

The 1930 crop will probably not be harvested much before the end of August, although it usually takes place during the first two weeks of that month. The ripening of the seed was retarded by heavy rainfall during the early part of July.

Recent transactions in French psyllium seed (black) for export to the United States have been at the rate of $21.50 per 100 pounds, gross for net, c. i. f. New York. (Assistant Trade Commissioner Earle C. Taylor, Paris.)

According to reports from the producing districts, it is highly improbable that any Spanish psyllium seed will be available for export during 1930. Excessive rains have almost ruined the crop which should have been harvested during May, June, and July.

Growers state that the 1930 yield will not reach 20 metric tons and that they have taken orders for more than that amount. Production during the past few years has been between 100 and 200 metric tons annually with the exception of 1929 when there was a shortage. Up to June 12, 1930 in the Seville area which usually produces almost 70% of the Spanish crop, only three tons had been picked.

Last quoted prices were five pesetas (about 55 cents) per kilo at the warehouses. Most dealers refuse to quote any prices. In normal years the average wholesale price has been about three pesetas per kilo at point of shipment. It usually is handled in double sacks of 100 kilos each. In 1928, another rainy year, the price rose to 4.50 pesetas. There is a steady demand in Spain for the seed which is used as a laxative and as "body" for certain types of perfumery. (Consul H. L. Stafford, Madrid).

		Current Market		1930 High	1930 Low	1929 High	1929 Low
HENNA LEAVES, bales	lb.	.10	.11	.13	.10	.13	.12½
Powdered	lb.	.14	.15	.16	.14	.17	.15
Hops, bales	lb.	...	.25	.25	.20	.32	.23
Horehound, Herb, bales	lb.	.08	.09	.09	.08	.09	.08
Hydrangea Root, bales	lb.	...	.07½	.09	.07½	.09	.08
Insect Flowers	lb.	.27	.28	.28	.27	.37	.18
Powdered, Pure, 200 lb bb	lb.	.25	.26	.35	.25	.46	.25
IPECAC ROOT, Carteagna, bags	lb.	2.25	2.50	4.25	2.25	4.25	2.70
Powdered, 220 lb bbls	lb.	2.65	2.75	4.45	2.65	4.45	3.20
Rio Whole, bags	lb.	2.90	3.00	4.00	2.90	4.00	2.85
Powdered, 110 lb bbls	lb.	3.40	3.45	3.50	3.25	3.50	3.40
Isinglass, American, 130 lb cases	lb.	.95	1.00	1.00	.95	1.00	.95
Russian (Beluga), boxes	lb.	4.50	...	4.50	4.50	4.50	4.50
Jaborandi Leaves, bales	lb.	.11	.11½	.22½	.11	.22½	.11½
Jalap Root, Whole, 150 lb bag	lb.	.21	.23	.43	.21	.45	.24
USP, Powd, 250 lb bbls	lb.	.26	.29	.48	.26	.50	.29
Japan Wax 24 lb cases	lb.	.18½	.19	.19	.18½	.19	.18½
JUNIPER BERRIES, 125 lb bags	lb.	.05	.05½	.07	.05	.09	.05
Kamala, boxes	lb.	.90	.95	1.45	.90	1.40	.82
Karaya Gum, Powdered, bbls	lb.	.12	.20	.20	.12	.20	.12
Kava Kava Root, bags	lb.	.14	.15	.15	.14	.15	.14
Kino Gum, Black, cases	lb.	.50	.55	.55	.50	.55	.50
Kola Nuts, 150 lb bags	lb.	.08½	.09½	.15	.08½	.15	.13
Lady Slipper Root, bags	lb.	.65	.70	1.15	.65	1.30	.85
Larkspur Seed, bags	lb.	.40	.45	.57	.38	.57	.40
Laurel Berries, bags	lb.	.08	.09	.09	.08	.09	.08
Leaves, Greek, bags	lb.	.04	.05	.06	.04	.06	.05
Italian, bales	lb.	.08	.09	.09	.03½	.04	.03½
Lavender Flowers, Ordinary	lb.	.28	.30	.35	.28	.35	.32
Selected	lb.	.35	.36	.46	.35	.46	.43
Lemon Peel, bags	lb.	.09	.10	.10½	.09	.13	.10
LICORICE ROOT, Whole bbls	lb.	.12	.18	.18	.12	.18	.12
Spanish Natural bales	lb.	.05½	.07	.07	.05½	.07	.05½
Powdered, bbls	lb.	.09	.10	.10	.09	.10	.09
Selected 2 & 5 lb bdls	lb.	.13	.15	.15	.13	.15	.12½
Cutting, 125 lb bags	ln.	.06½	.07	.07	.06½	.07	.06½
Turkish, 150 lb bales	lb.	.05	...	.05	.05	.05	.05
Linden Flowers with leaves, bales	lb.	.17½	.18½	.24	.17½	.27	.23
Without leaves, bales	lb.	.22	.23	.29	.22	.32	.28
Liverwort Leaves, bales	lb.	.18	.19	.19	.18	.20	.18
Lobelia, Herb, bales	lb.	.10	.11	.13	.10	.16	.12
Seed, bags	lb.	.45	.50	.50	.45	.65	.45
Lovage Root, Imp., bags	lb.	.25	.27	.37	.25	.37	.25
Lupulin N. F., tins	lb.	1.50	1.55	1.65	1.50	1.75	1.65
Lycopodium, 88 lb. cases	lb.	.48	.50	.68	.48	.85	.66
MACE SIAUW, No. 1, cases	lb.	.55	.56	.82	.55	.86	.80
Banda No. 1, cases	lb.	.63	.64	.86	.63	.98	.85
Batavia No. 2, cases	lb.	.39	.40	.50	.39	.58	.47
Malva Flowers, Blue, bales	lb.	.35	.37	.57	.35	.57	.40
Black, bales	lb.	.40	.55	.55	.40	.60	.40
Leaves, bales	lb.	.14	.15	.15	.12	.15	.14
Manaca Root, bales	lb.	...	.25	.25	.24	.24	.22
Manna, Large Flake, cases	lb.	1.00	1.02	1.02	.90	.92	.75
Small Flake, cakes	lb.	.75	.83	.83	.57	.65	.52
Sorts, cases	lb.	.45	.50	.50	.45	.50	.45
Mandrake Root, bags	lb.	.10	.11	.13	.10	.14	.12
Marjoram, Herb							
French, No. 1 bales	lb.	.15	.15½	.19	.15	.19	.16
German, bales	lb.	.24½	.24½	.26	.24	.25	.22
Mastic Gum, 120 lb cans	lb.	.65	.70	.70	.65	.70	.65
Matico Leaves, bales	lb.	.18	.29	.31	.18	.32	.30
Mezereon Bark, bags	lb.	.20	.21	.25	.15	.25	.20
Millet Seed, Yellow, bags	lb.	.03½	.03½	.04½	.03½	.04½	.03½
Montan Wax, Crude, bags	lb.	.06½	.07	.07	.06½	.07	.06½
Bleached, bags	lb.	.25	.28	.28	.25	.28	.25
Moss, Iceland, bales	lb.	.10	.12	.12	.10	.11	.10
Irish, Bleached, bales	lb.	.13	.16	.17	.13	.18	.13
Mullein Flowers, tins	lb.	.95	.97	1.40	.95	2.00	1.35
Leaves, bales	lb.	.07½	.08	.08	.07½	.08	.07½
Musk Root, Russian, bags	lb.	.07½	.08½	.10	.07½	.12	.09
Myrrh Gum, 200 lb, cases	lb.	.18	.20	.35	.18	.65	.32
Nutgalls, Chinese, bags	lb.	.22	...	.22	.22	.22	.22
Aleppy, bags	lb.	.21	...	.21	.21	.21	.21
Powdered, bags	lb.	.23	...	.23	.23	.23	.23
Nutmegs, 110's cases	lb.	.18½	.19	.27	.18½	.31½	.26
75's & 80's cases	lb.	.23	.24	.37	.23	.42	.36
Grinding, bags	lb	.22	.23	.25	.22	.25	.24
NUX-VOMICA Buttons, bag	lb.	.05	.06	.06	.05	.06	.05
Powdered, 200 lb bbls	lb.	.08½	09	.09	.08½	.09	.08
Oak Bark, bags	lb.	.05	.05½	.05½	.05	.05½	.05
Olibanum Gum, 280 lb cases							
Siftings	lb.	.12	.13½	.14	.12	.15	.12½
Tears, No. 1 Extra	lb.	.25	.26	.30	.25	.29	.27
No. 2	lb.	.18	.20	.20	.18	.23	.18
No. 3	lb.	.14	.16	.16	.14	.18	.14
Opium Gum, USP, cases	lb.	12.00	13.00	13.00	12.00	13.00	12.00
Granular, cans	lb.	13.00	14.00	14.00	13.00	14.00	13.00
Powdered, USP, cans	lb.	13.00	14.00	14.00	13.00	14.00	13.00
Orange Flowers, cases	lb.	.30	.35	.40	.25	.30	.25
Peel, Bitter, bags	lb.	.09	.10	.12	.09	.12½	.10
Sweet bags	lb.	.08	.09	.15	.08	.16	.11
ORRIS ROOT, Flor. bid. bags	lb.	.27	.28	.30	.27	.32	.17
Powdered, 200 lb bbls	lb.	.30	.32	.34	.30	.35	.21
Verona, bags	lb.	.19	.20	.24	.19	.25	.16
Powdered, 200 lb bbls	lb.	.23	.24	.27	.23	.32	.20
Fingers, boxes	lb.	.95	1.00	1.20	.95	1.20	.90
Ozokerite Wax, Brown, Hard	lb.	...	...	...	...	...	...
Bags	lb.	.24	.25	.25	.24	.25	.24
Green, Hard, bags	lb.	.30	.31	.31	.30	.31	.30
Yellow, Refined, bags	lb.	.37	...	.37	.37	.37	.37

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Spanish Ergot Trade

According to Consul W. H. McKenney, Vigo, Spain, a great deal of the ergot sent from Germany and the Netherlands originates in the Vigo area of Spain, which region accounts for the bulk of the Spanish production and is merely marketed by exporting houses in those countries.

German exporters do a considerable volume of business in Spanish ergot and their buyers are constantly in touch with Vigo shippers. Only a few Spanish dealers are really active in the ergot trade and when the Spanish crop is exhausted the dealers go to Portugal where stocks are always available. As there does not appear to be any organized commerce in ergot in Portugal, the production of that country is usually available to stabalize the Spanish industry.

Spanish saffron has strengthened on spot somewhat and is now offered at $8.75 and $9.00 per lb. This is somewhat out of line with replacement costs which have been easier, due principally to a large crop and favorable rate of exchange. It does not seem logical to assume that this commodity can be maintained at existing prices.

Insect flowers have not changed in price during the past month although sellers competition tends to keep the market on the easy side. Buyers find the market favorable and a fair sized movement is reported into consuming channels.

Arnica was easier during the past month. Prices have been market down to 16c and 18c per lb. with competition in most quarters being very keen due to an absence of demand.

Belladonna leaves are unchanged in price from prevailing levels of last month. The product, however, is reported as being more competitive with a disposition on the part of sellers to shade quotations in order to attract business.

French marjoram shows an easier undertone as demand has been very light. Efforts have been made by dealers to move the commodity. The German product is unchanged in price but also shows an easier undertone.

Caraway is reported as approaching a range that is safe for buying. The new crop is reported now as being heavy. Former reports of a small crop have been discounted. With demand in a small way price has been easy.

Dandelion is weaker with prices at 22c and 24c per lb. Reports of an excellent crop in Germany are mostly responsible for the decline. Stocks on spot are not large but demand has been noticeably small.

Passion flowers are unchanged in price although some shading has been reported due to small demand and the fact that stocks are ample.

		Current Market		1930 High	1930 Low	1929 High	1929 Low
Papain, Crude, 150 lb cases	lb.	2.75	2.80	3.15	2.75	3.50	2.95
Pure, Powdered, 10 lb bot.	lb.	2.80	2.85	3.30	2.80	3.55	3.10
Paprika, bags	lb.	.21½	.22	.24	.21½	.33	.23½
Pareira Brava Root, bags	lb.	.13	.14	.14	.13	.14	.11
Passion Flower, bales	lb	.05½	.06½	.10	.05½	.75	.09
Patchouli Leaves, bales	lb.	.20	.21	.23	.20	.23	.22
Pennyroyal, Herb, 100 lb bags	lb.	.07	...	.07	.07	.07	.07
Leaves, 100 lb bags	lb.	.14	.16	.16	.14	.16	.14
PEPPERMINT LEAVES, Imp bales	lb.	.65	.75	.75	.65	.75	.43
Domestic, bales	lb.	.30	.31	.46	.30	.46	.24
Pichi Leaves, bags	lb	.12	.13	.14	.12	.16	.13
Pimento Select, bags	lb.	.14½	.15	.19½	.14½	.30½	.19½
Pink Root, True, bags	lb.	.48	.50	.57	.48	.60	.55
Pleurisy Root, bags	lb.	.19	.20	.23	.19	.28	.21
Poke Berries, bags	lb.	...	.18	.18	.18	.30	.18
Root, 200 lb bales	lb.	.08	.08½	.08½	.08	.08½	.07½
Pomegrant Bark of Root, bags	lb.	.30	.35	.35	.30	.35	.20
Bark of Fruit, bags	lb.	.25	.30	.30	.25	.30	.25
Bark of Tree, bags	lb.	.18	.22	.22	.18	.22	.15
POPPY FLOWERS, Red, bags	lb.	.55	.60	.60	.55	.60	.50
Heads, bags	lb.	.50	...	.50	.50	.50	.50
Prickly Ash Bark	lb.	.14	.17	.17	.14	.17	.14
Southern bags	lb.	.13½	.14	.14	.13½	.14	.13½
Northern, bags	lb.	.15	.16	.16	.15	.18	.15
Berries, bags	lb.	.14	.15	.24	.14	.21	.19
Prince's Pine, bales	lb.	.20	.25	.50	.20	.50	.15
Pulsatilla, Herb, bags	lb.	.11	.12	.12	.11	.14	.12
Pumpkin Seed, bags	lb.	.14	.15	.15	.14	.15	.14
Quassia Chips, bags	lb.	.06½	...	.06½	.06½	.06½	.06½
Quebracho, bulk, 125 lb. bbl.	lb.	.30	.31	.31	.30	.31	.29
Root, bags	lb.	...	.07	.07	.07	.07	.07
Quince Seed, bags	lb.	1.10	1.20	1.20	.80	.80	.70
Persian, bags	lb	1.30	1.35	1.35	.95	1.25	.80
Rape Seed, South American, bags	lb.	.05½	.06	.06	.05½	.06	.05½
Dutch, bags	lb.	.06	.06½	.07½	.06	.07½	.06
Japanese, small bags	lb.	.04	.04½	.06½	.04	.07	.05½
Raspberries, Dried, bbls.	lb.	.40	.45	.60	.40	.60	.45
Red Saunders, bags	lb.	.08	...	.08	.08	.08	.08
Rhatany Root, bags	lb.	.11	.12	.13	.11	.13	.11
Rhubarb Root, HD, cases	lb.	.19	.20	.28	.19	.41	.27
Powdered, bbls.	lb	.24	.26	.85	.24	.46	.33
Rosemary Leaves, bales	lb.	.05	.05½	.05½	.05	.06	.04½
Flowers, cases, bales	lb.	.25	.30	.30	.25	.30	.25
Rose Petals, pale	lb.	.21	.22½	.41½	.21	.42½	.40
Red	lb.	.95	1.00	1.70	.95	1.80	1.65
Rue, Herb, bales	lb.	.18	.20	.20	.18	.20	.18
Sabadilla Seed, bags	lb.	.29	.30	.31	.28	.34	.28
Powdered, bbls.	lb.	.30	.31	.33	.27	.39	.30
SAFFRON FLOWERS, American, bales	lb.	.27	.28	.35	.27	.40	.30
Valencia, 1 lb cans	lb.	8.75	9.00	11.50	8.00	12.00	10.50
Sage Dalmatian, bales	lb.	.05½	.06	.06	.05½	.06	.05½
Greek, bales	lb.	.05½	.06	.06	.05½	.06	.05½
Sandarac Gum, 300 lb bbls.	lb.	.45	.50	.75	.45	.75	.40
Sarsaparilla Root, Honduras, bales	lb.	.46	.47	.54	.46	.55	.53
Mexican, bales	lb.	.16½	.18½	.26	.16½	.40	.24
Sassafras Bark, Ordinary, bales	lb.	.12	.14	.16	.12	.16	.14
Select, bales	lb.	.19	.21	.24	.19	.28	.22
Savory Leaves, bale	lb.	.07½	.08	.09	.07½	.09	.08½
Saw Palmetto Berries, bags	lb.	.09	.10	.10½	.09	.12	.09½
Scammony Resin, boxes	lb.	1.30	1.35	1.35	1.30	1.35	1.30
Root, bags	lb.	.08½	...	.08½	.08½	.08½	.08½
Senega Root, bags	lb.	.80	.85	1.05	.55	1.35	1.00
SENNA ALEX., 150 lb cases	lb.	.25	.30	.30	.25	.30	.25
Half leaf 150 lb cases	lb.	.12½	.14½	.14½	.12½	.15	.12½
Sifting, 400 lb bales	lb.	.11	.11½	.11½	.11	.11½	.10½
Tinnevelly, Bold, 350 lb bales	lb.	.16	.18	.18	.16	.18	16
Medium Leaf	lb.	.11	.12	.12	.11	.12	.10
Small Leaf	lb.	.07	.09	.09	.07	.10	07
Pods, 350 lb	lb.	.08	.08½	.08½	.08	.11½	.08
Powdered, 200 lb	lb.	...	.10	.11	.10	.11	.11
Serpentaria Root, bags	lb.	.52	.55	.68	.52	.72	.65
Shellac, T. N., bags	lb.	.57	.58	.58	.57	.58	.57
Simaruba Bark, bales	lb.	.25	.27	.28	.20	.40	.20
Skullcap Leaves, Eastern, bales	lb.	...	.75	.75	.75	.75	.40
Western, bales	lb.	.25	.26	.35	.25	.35	.18
Skunk Cabbage, Striped, bales	lb.	.11	.13	.16	.11	.16	.14
Snake Root, Canada Natural, bags	lb.	.27	.28	.28	.27	.28	.24
Canada, Stripped, bags	lb.	.55	...	.55	.55	.55	.55
Soap Bark	lb.	.14	.15	.15	.14	.15	.14
Cut, 125-175 lb bags	lb.	.09	.09½	.11½	.09	.16	.11
Crushed, 200 lb bbls.	lb.	.16	...	.16	.16	.16	.16
Powdered, bbls.	lb.	.15	...	.17	.15	.17	.17
Spearmint Leaves, American, bales	lb.	.35	.36	.37	.32	.37	.25
Spermaceti, blocks, cakes, cases	lb.	.32	.35	.35	.32	.35	.32
Spikenard Root, bags	lb.	.15	.15½	.20	.15	.20	.18½
Squaw Vine, bales	lb.	.14	.15	.21	.14	.21	.18
Squills, White	lb.	.07½	.08½	.10	.07½	.13	.09
Powdered, bulk	lb.	.23	.25	.25	.23	.25	.20
Stavesacre Seed, bags	lb.	.14	.15	.17	.14	.18	.16
Stillingia Root, bags	lb.	.08	.09	.10	.08	.12	.09
Stone Root, bags	lb.	.08	.09	.09	.08	.09	.08
St. Ignatius Beans, bags	lb.	.14½	.15	.15	.14½	.15	.14½
St. John's Bread, bags	lb.	...	.09	.09	.09	.09	.09
STRAMONIUM LEAVES, bales	lb.	.14	.16	.18	.14	.20	.16
Seed, bags	lb.	.07½	...	.07½	.07	.07½	.07½

{ Monthly Review }

Gum Tragacanth Market

Against all expectations, the local gum tragacanth market revived during June and even doubled transactions with regard to May. The Soviet agents took delivery of the 10 tons they contracted for and evidenced a desire to place new orders for at least 10 tons of relatively inferior grades. Sales from May 25 to June 24 aggregated 232 sacks; 36 sacks, white, at piasters 192½ and 257½ per oke; 83 sacks, biondo and natural, at piasters 130 and 155 per oke; 58 sacks, yellow, at piasters 92½ and 105 per oke; 27 sacks Djalo, at piasters 40 and 90 per oke; 28 sacks, Scarto (refuse) at piasters 36 per oke; 232 sacks total.

Locally available stocks toward the end of June were composed as follows 83 sacks, 1927 production; 84 sacks, 1928; 510 sacks, 1929; and 677, total sacks, divided among 22 stockholders, of the local market. Some 70 sacks more are expected from Anatolia representing the carry-over of last year's production. Gathering activities for this year would seem to be less important than usual, as the heavy harvest and crops of other products so occupied the peasant that little attention was given to gum tragacanth.

Prices quoted lately are such as to exclude a new decline until the next campaign in August-September. (Commercial Attache, Julian E. Gillespie, Istanbul.)

Larkspur has been stronger and during the past month prices were marked up to 40c and 45c per lb. An increase in the demand for this commodity has been noticed all along the line with the corresponding strengthening of the market.

Thyme is lower at 8c and 8½c per lb. for Spanish, and 8¾c and 9¼c per lb. for the French. The contributary factors in reducing this commodity on spot are the lower prices paid for new crop goods and the low rate of Spanish exchange.

Exports of ginseng from Japan through the port of Kobe (which accounts for the bulk of the export trade) to all countries during 1928 amounted to 367,000 pounds valued at $71,354, while exports from Yokohama, the only other port exporting ginseng, amounted to 152,000 pounds valued at $45,604. All exports were destined for Hong Kong or China. (Consul E. R. Dickover, Kobe, Japan.)

In Denmark no botanicals are grown from which essential oils are obtained. Previously there has been a small industry near Odense in the island of Funen for the production of peppermint oil. This production has, however, never been of any worthwhile commercial value and has gradually dried up entirely.

Denmark is thus entirely dependent upon foreign countries as suppliers of essential oils. All essential oils imported into Denmark are in manufactured state and are distributed through importers and wholesalers directly to the consumers, such as pharmacists, manufacturers of confectionery, perfumery, and soap. There is no statistical material available covering importation or consumption of essential oils. (Assistant Trade Commissioner Harold Nelson, Jr., Copenhagen.)

	Current Market		1930 High	1930 Low	1929 High	1929 Low
Strophanthus Seed, Kombe, bags	lb.	2.25	2.50	2.50	2.25	2.50	2.00
Styrax Liquid, Artificial	lb.	.26	.35	.35	.26	.35	.26
Genuine, USP	lb.	.40	.45	.45	.40	.45	.40
Sunflower Seed, bags Calif	lb.	.04¾	.05	.07	.04¾	.07	.06
South American, bags	lb.	.07	.07½	.07½	.07	.07½	.07
Tamarinds, bbls	lb.	.09	.10	.16	.09	.10	.05
Kegs	keg	3.85	...	3.85	3.85	3.75	3.85
Tansy, Herb, bales	lb.	.15	.16	.16	.15	.16	.11
Thus Gum, 280 lb bbls	lb.	.08	.17	.20	.08	.20	.11½
THYME, Spanish, bales	lb.	.08	.08½	.16	.08	.16	.08½
French, bales	lb.	.08¾	.09¼	.11½	.08¾	.12½	.08
Tonga Root, bundles	lb.	.25	.26	.42	.25	.42	.42
Bark, bundles	lb.	.25	.26	.42	.25	.42	.42
Tonka Beans, Angostura Cases		1.75	1.85	1.85	1.75	2.00	1.75
Para cases	lb.	.90	...	.90	.90	.90	.90
Surinam cases	lb.	1.00	1.10	1.10	1.00	1.50	1.00
Tragacanth Gum, No 1, 100 lb. cases	lb.	1.45	1.50	1.50	1.45	1.60	1.50
No. 2	lb.	1.30	1.40	1.40	1.30	1.50	1.30
No. 3	lb.	1.10	1.20	1.20	1.10	1.30	1.10
Powdered, 50 lb boxes	lb.	.90	1.00	1.00	.90	1.10	.90
Turkish cases	lb.	.50	.90	.90	.50	.90	.45
Turmeric Root Madras, bags	lb.	.08½	.08¾	.08¾	.08½	.09	.08¼
Aleppy bags	lb.	.07½	.07¾	.09	.07⅞	.10	.08¼
Powdered	lb.	.13	.15	.15	.13	.15	.13
China bags	lb.	.11	.12	.12	.11	.12	.11
Turpentine Venice True, 80 lb cases	lb.	.32	.40	.40	.32	.40	.32
Artificial, 80 lb cases	lb.	.17	.18	.18	.17	.18	.17
Uva Ursi Leaves, bales	lb.	.06	.06½	.06½	.06	.06½	.06
Valerian Root, Belgium, bags	lb	.12	.14	.21	.12	.30	.19
VANILLA BEANS, Mexican, whole, cases	lb.	4.25	5.50	5.50	3.50	4.50	3.25
Cuts, cases	lb.	3.25	3.40	3.40	2.75	3.30	2.50
Bourbon, cases	lb.	1.35	1.75	2.50	1.35	2.65	1.75
South American, cases	lb.	3.00	3.25	3.25	2.85	3.00	2.50
Tahiti, Green, label cases	lb.	...	Nom.	2.00	1.75	2.50	1.75
Vetivert Root, 100 lb bags	lb.	.25	...	.25	.25	.25	.25
Violet Flowers, bags	lb	.75	.80	.80	.75	1.00	.68
Wahoo Bark of Root, bags	lb.	.46	.47	.53	.46	.56	.51
Bark of Tree, bags	lb.	.25	.26	.26	.25	.31	.25
White Pine Bark, Roseed, bags	lb.	.06	.08	.09½	.06	.15	.07
White Poplar Bark, bags	lb.	.06	.07½	.07½	.06	.07½	.05½
Wild Cherry Bark, Thin, Green	lb.	.11	.12	.15	.11	.20	.14
Rossed bales	lb.	.11	.12	.12	.11	.12	.11
Thick Rossed, bales	lb.	.08	...	.09	.08	.09	.09
Thin Natural, bales	lb.	.07½	.08½	.09	.07½	.09	.07½
Thick Natural, bales	lb.	.06	.06½	.06½	.06	.06½	.05
Wild Indigo Root, bags	lb.	.13	.14	.15	.13	.15	.13
Willow Bark, bags	lb.	.05	.05½	.05½	.05	.05½	.05
White, bags	lb.	.15	...	.15	.15	.15	.15
Witch Hazel Bark, bags	lb.	.06	.07	.08	.06	.08	.05½
Leaves, bales	lb.	.07	.08	.08	.07	.08	.06½
Wormseed, American, bags	lb.	...	.08½	.11	.08½	.13	.10
Levant, bags	lb.	3.50	3.65	3.00	3.50	4.15	3.65
Wormwood, Herb, Imp., bales	lb.	.08	.08¼	.08¼	.08	.10½	.08
Yellow Dock Root, bags	lb.	.08	.09	.14	.08	.14	.10
Yerba Mate, bags	lb.	.18	.20	.20	.18	.20	.18
Santa, bags	lb.	.09	.10½	.11	.09	.11½	.09½
Zedoary Root, bags	lb.	.07	.08	.08	.07	.08	.06½

Miscellaneous

Castor Oil, odorless, bbls	lb.	...	.13½	.14½	.13½	...	...
Chalk drop, 175 lb. bbls	lb.	...	.03½	.03½	.03½	.03½	.03½
Precip. light, 250 lb. cask	lb.	...	.04½	.04½	.04¼	.04½	.04½
Heavy 540 lb. casks	lb.	...	.02½	.02½	.02½	.03½	.02½
Bulk	ton	...	5.00	5.00	5.00	5.00	5.00
English light, bags	lb.	...	.04¼	.08½	.08½	.08½	.08½
English light, casks	lb.	.05½	...	...	...	...	...
Cocoa Butter, 12 lb. box	lb.	.42	.45	.45	.42	.45	.42
Cod Liver Oil Nor. 30 gal. bbls		27.00	28.00	31.00	27.00	36.00	22.00
Newfoundland	bbl.	...	31.00	31.00	30.00	46.00	30.00
Collodion U. S. P. 30 lb. dr.	lb.	...	.23	.23	.23	.23	.23
Corn Syrup 42° 50 gal. bbl.	100 lb.	3.91	4.16	4.16	3.91	4.16	3.91
Gelatin, USP, Silver 100 lb. cases	lb.	.55	.60	.60	.55	.60	.55
Pure Food, 50 lb. bbl	lb.	.53	.55	.55	.53	.55	.55
Glucose, (grape sugar) dry 70° bags c-l NY	100 lb.	3.14	3.24	3.24	3.14	3.24	3.14
Haarlem Oil, bot 6 gross cases	gross	...	3.75	3.75	3.75	3.25	3.25
Imported, 5 gr. cs	gross	...	3.50	3.50	3.50	3.50	3.50
Mineral Oil White, 50 gal. bbls. 80-85 vis	gal.	.50	.55	.55	.50	.67	.50
85-90 vis	gal.	.65	.70	.70	.65	.70	.65
125-130 vis	gal.	.75	.85	.85	.75	.92	.65
290 vis	gal.	.90	1.10	1.10	.90	1.10	.90
Russian 110-115 vis	gal.	.69	.79	.80	.69	.80	.70
145-155 vis	gal.	.72	.82	.84	.72	.89	.67
320-330 vis	gal.	.80	.90	.92	.80	.97	.75
Olive Oil, Edible bbls	gal.	2.00	2.40	2.40	2.00	...	...
Petrolatum, Lily White, USP. 400 lb. bbl	lb.	.08	.09	.09	.08	.09	.08
Snow White USP, 400 lb. bbls	lb.	.09½	.10	.10	.09½	.10	.09½
Soap Castile, bars 50 lb. box	lb.	...	.25				
Powd. USP 250 lb. bbls	lb.	...	.20				
Green, USP, 450 lb. bbls	lb.	.07½	.07½				
Neutral, powd. bbls	lb.	.17	.18				

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NORWEGIAN COD LIVER OIL

An Antiseptic

(*Continued from page 233*)

that a certain preparation would "destroy a billion four hundred million germs in fifteen seconds, and went on to explain that the law in the United States required such a preparation to kill only two hundred million germs in 300 seconds."

Such a statement, according to Dr. Durrett, means nothing, being only a jumble of big figures to make an impression "when as a matter of fact any antiseptic mouth wash and gargle meeting only the minimum requirements, easily accomplishes such results." These statements "are loosely based on test tube experiments," said Dr. Durrett, and one has only to use a bucketful or bathtub full of water, a larger quantity of antiseptic, and more germs to raise the figures to any desired size.

Dr. Durrett cautions that mouth washes and gargles are weakened by saliva; that they are only in the mouth a few seconds once or twice a day; that they can't possibly reach the "actual sites of many beginning infections." Mouth washes and gargles are legitimate and useful when recommended and used for what they are capable of doing he says. Many are cleansing, soothing, refreshing or deodorizing, and if they are antiseptic "there is no possible objection to designating them as such."

In conclusion Dr. Durrett declared that the food and drug law forbids the manufacturer stating on his label that his preparation "is antiseptic when it is not," also that it forbids him from stating on his label that his "antiseptic mouth wash and gargle will prevent or cure sore throat or any other infection of the respiratory tract, when he knows that this is untrue." But, he points out, the law does not prevent such statements being made in general advertising, and suggests that it is therefore safer to judge what an alleged antiseptic preparation is," by statements made on the label rather than those made elsewhere."

To sum up. There has been no change in the attitude of the Department of Agriculture as to the definition of what constitutes an antiseptic or as to the methods of determining whether a preparation is in fact antiseptic. Since the campaign on alleged antiseptics started originally three or four years ago the department has been told by a number of manufacturers that they would comply with the department's requirements by either changing their labels or their formulae. Now the department wants to ascertain whether manufacturers have kept their promises. Hence the check-up on alleged antiseptics.

Edward B. Caldwell, president of the Caldwell & Bloor Co., pharmaceutical manufacturer, Mansfield, Ohio, died in his home in that city August 2. He was in his seventieth year.

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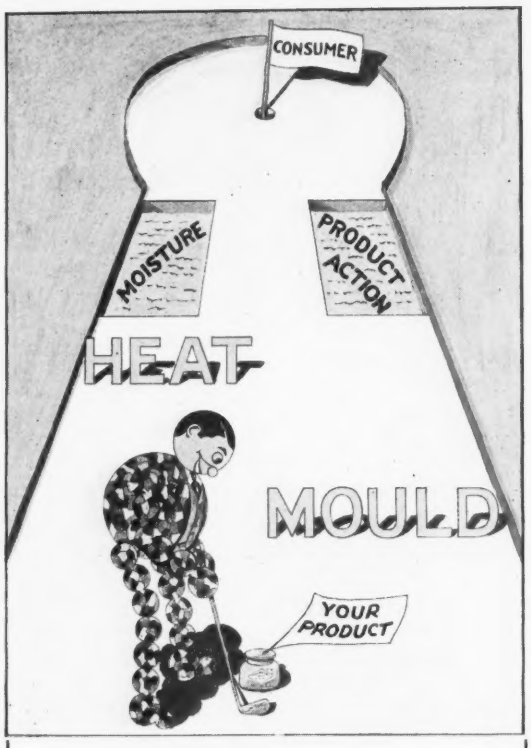

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